The contribution of poker machines to reduced community wellbeing: a pre and post study

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Contents

List of Tables

Abstract

This thesis reports on a study of the impacts of poker machines on community wellbeing, using a pre and post survey method. The study used a variety of indicators to test community wellbeing and gambling attitudes and behaviours before and after a hotel venue with 40 poker machines opened in a new suburb in the designated growth area of Melbourne's northern fringe. There was a higher proportion of respondents who met the criteria for 'problem gambling' after the poker machines were installed, compared to before, particularly when considered as a proportion of people who gambled on poker machines (5.3% compared to 3.6%). A proportion of respondents reported reduced levels of personal happiness, contentment and wellbeing as a result of the introduction of poker machines (16.5%, 12.3% and 16.1% respectively) and 41.5% reported there had been a detrimental impact on the community, in terms of social character. Mean scores on sense of community indexes and social cohesion showed a small decline in the post sample on every measure. Overall, the community reported reduced wellbeing on all measures after the introduction of poker machines. The significance of this study is that measures of community wellbeing and attitudes towards poker machines were measured before their introduction so that this baseline data could be compared with reported wellbeing 18 months after their installation within the suburban area. The substantial proportion of respondents who reported detrimental impact on social character, along with many negatively expressed opinions of poker machines, and a higher rate of problem gambling provide support for the notion that the introduction of poker machines at least contributed to the reduction in community wellbeing. This research provides some suggestions for the use of indicators for measuring the impact of poker machines on community wellbeing.

Statement of Authorship

Except where explicit reference is made in the text of this thesis, this thesis contains no material published elsewhere or extracted in the whole or in part for a thesis by which I have qualified for or been awarded another degree or diploma. No other person's work has been relied upon or used without the due acknowledgement in the main text and in the bibliography of the thesis.

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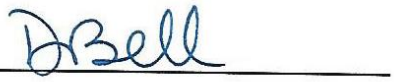
Signed: 

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Introduction

I have worked in the local government sector for eight years. Working in areas variously known as ‘community services’, ‘integrated planning’ and ‘social development’ my role has involved gathering and examining social, economic and health data on the local community, understanding the wider research that explains some of that local data, understanding the relevant policies of the state and federal governments, and planning strategies to address existing and emerging conditions in the municipality that enhance or detract from the wellbeing of the community. It is well accepted that population health is socially determined, and that the social determinants of health can be strongly influenced not just by individual socioeconomic status, but by the environmental conditions in which we live. The Victorian state government encourages the ‘environments of health’ approach in municipal public health planning, recommending consideration be given to the social, economic, built, and natural environments (Department of Health, 2013). Since 2008, Municipal Public Health and Wellbeing plans are a statutory requirement of local government in Victoria, with a new plan to be prepared within 12 months of each Council election which happens every four years. In general, residents are aware of the more traditional aspects of Council-delivered public health, such as food safety inspections and immunisations, and the provision of sporting facilities and walking/cycling trails. With legislated health and wellbeing planning being relatively recent, engaging the community on the ‘environments of health’ has been an interesting journey. As council officers, my colleagues and I regularly hold conversations with the community on topics that were not previously articulated as public health matters, but were considered to be ‘private’ or individual matters. Family violence, obesity, sexual and reproductive health, social inclusion, and gambling are among these matters that local governments now develop strategies to address in their populations as public health matters. This is because it is recognised that these are not issues that belong just to the affected individuals, but are generated through, reproduced by and

have impacts on the whole community. Going further, we also explore with our communities the environmental conditions that protect, promote, or detract from community wellbeing. A simple example of a healthy built environment is retaining strip shopping centres in neighbourhoods because they can encourage walking and foster social interaction which strengthens a sense of belonging.

Gambling has been one of the more complex matters to address in health and wellbeing planning. Justified as an economic good, poker machines were distributed in communities across Victoria in a relatively short period of time during the 1990s. Within a decade of licences being issued, negative impacts were being observed. The 2003 Victorian Longitudinal Community Attitudes Survey (McMillen, Marshall, Ahmed, & Wenzel, 2004) found a substantial majority of Victorians considered that gambling was a serious social problem, that gambling was too widely accessible, and that gambling-related problems had worsened. The Victorian Local Governance Association set up a Local Government Working Group on Gambling (LGWGOG) to help build capacity among councillors and council officers to navigate the State government regulatory system, to keep abreast of the research on poker machine impacts, and to assess the social and economic impacts of poker machine applications. Having no knowledge or experience of the public health impact of poker machines, in 2009 I joined this group to learn about the issue as part of my work. My work related to poker machines has included officer briefings of council, council reports, discussion papers, community consultations and policy development. I have undertaken social and economic impact assessments and submissions for councils on poker machine applications, and defended these under cross-examination at the Victorian Commission for Gambling and Liquor Regulation. These experiences were my motivation for doing this study.

This study is part of a larger research project designed to examine the effects of the introduction of poker machines on community wellbeing. The project was conducted by the University of Ballarat, now Federation University Australia, in partnership with the

City of Whittlesea. Funding was provided by an Australian Research Council Linkage grant (number LP0989647), with cash and in kind contributions from the Victorian Local Governance Association and 29 local councils. The larger project, titled *The impact of the introduction of poker machines on communities: Health and wellbeing consequences,* commenced in 2009, has addressed a gap in an identified lack of research on community-level effects of poker machine gambling. The rationale for this project is that most of the research on gambling focuses on understanding the traits, behaviours and motivations of the individual gambler that lead to problem gambling, with much less research on how communities are affected. This is particularly important in Australia, where machines are found in people's 'locals' – the pubs and clubs that are central to communities. In Victoria, the Victorian Commission for Gambling and Liquor Regulation (VCGLR) is required to consider the community impacts of poker machines when assessing applications, but to date there is no agreed set of indicators to provide measurable impacts and very little research specifically measuring the impacts on communities. The current focus by the Victorian government on 'problem' gambling which affects about one percent of the population fails to take account of the impacts among people who engage with poker machines, the health and wellbeing impacts on people who are only at the low or moderate end of the risk scale, and the wider impact on the community. The three studies comprising this project all took place in the City of Whittlesea. The first study investigated the effects of poker machines in localities with high numbers of machines and high losses from gambling on them. Targeted interviewing of people working in support services revealed real life examples of impacts, including adverse impacts on families, the impact on vulnerable people, and the State government reliance on gambling revenue. The participants pointed out how harm spreads widely outwards from the gambler to community level impacts. The second study examined the relationship between poker machines and a rural township. It showed how legitimising club-based poker machines as a community benefit served the interests of some parts of the community, whilst also serving to hide the costs to the

community through shame and stigma. The present study is located in a rapidly growing part of the municipality made up of newly subdivided housing estates, and given the pseudonym of 'Greenridge'. This community has gone from a sparse population of 6,600 to over 60,000 over the past 15 years. Whilst not considered socioeconomically disadvantaged, this number of new home-owners starting families in the outer suburban fringe are certainly vulnerable to financial pressures from interest rates and mortgage defaults. When a centrally located hotel was granted approval to install poker machines, it created an opportunity to test the impact on community wellbeing, which is the focus of this study.

This thesis first sets the regulatory context for poker machine gambling in Victoria, followed by a literature review on the community impact. Public health theory is explained as a useful way to examine the impacts of poker machine gambling. The research setting is then described, followed by methods used to measure community wellbeing and gambling behaviours. The results are then presented and discussed.

Background: Policy, regulation, and public health

Gambling is an established activity in Australia, with a long tradition of betting on horse races, card games and two-up (Australian Institute for Gambling Research, 1999). These forms of gambling haven't changed much over time, although betting on all three are now available online with increasing ease. Poker machines have been operating in New South Wales clubs since 1956, but have only been legal in Victoria since 1992 (McMillen & Wright, 2008). When poker machines in large numbers were legalised in the 1980s and 1990s, they quickly became fixtures in pubs and clubs throughout towns and suburbs in every state and territory except Western Australia.

Poker machines are the most addictive form of gambling (Productivity Commission [PC], 2010a). Poker machines are offered in clubs, pubs and casinos throughout Australia as a form of entertainment that consumers pay to use by betting on randomly generated patterns of symbols. The machines are programmed to win so that the owner of the machine will always gain a proportion of every dollar bet. These machines differ from poker machines operating in other countries with high spin rates and high maximum spend rates, and other features including bank note acceptors and progressive linked jackpots (Dowling, Smith, & Thomas, 2005; Productivity Commission, 1999a). This means a lot of money can be lost in a short time, making it an unusually expensive form of entertainment.

In Victoria, poker machines are programmed to keep up to 15% of the money bet on them each year, after deductions for any special jackpots. They are computers that pay out prizes at random intervals, but they are designed to win. The way they are programmed means that at any time a person plays, they are likely to lose more than 15% of what they spend on average. The Victorian Responsible Gambling Foundation offer the following advice on the chances of winning on poker machines:

> Poker machines are programmed to pay out less than you put into them, so the odds are you will lose.
>
> The longer you play a poker machine, the more likely you are to lose all the money you have put in the machine.
>
> When playing a game like Black Rhinos, to have a 50 per cent chance of getting five rhinos, playing one line at a time, it would take 6.7 million button presses and cost nearly $330,000 (Victorian Responsible Gambling Foundation [VRGF], 2014).

Design features are developed to attract players and keep them gambling for longer. Some features can be deceptive, such as losses displayed as wins with accompanying sounds and flashing lights, and frequently occurring 'near misses'. These features are deliberately programmed into the machines to have a positive reinforcement effect for losses, and can lead to addiction (Alliance for Gambling Reform, 2015; Manning, 2015). There is a widespread lack of understanding of how poker machines work, especially the chances of winning. This can lead people to significantly underestimate the price they are paying for this entertainment. The maximum bet limit in Victoria is $5 per button push, which means the average cost of play when betting at the maximum bet limit is $600 per hour on a one cent machine that is set to return 90 cents in the dollar (PC, 2010a).

With the rapid expansion of poker machines, Australia became the highest spending nation on regulated gambling in the world (The Economist, 2014). By the late 1990s, there were widespread concerns about gambling-related social problems. But concerns at a community level competed with the notion that problems are located within the individual pathological gambler (Livingstone & Adams, 2011; Young, 2013). These competing notions still have implications for government policy and regulation. The phenomenal increase in gambling, the gambling industry, and gambling-related harms led to the Productivity Commission conducting a national inquiry into the regulation of the gambling industry, and social and economic impacts of gambling in Australia (McMillen & Wright, 2008). The resulting report, *Australia's Gambling Industries* (1999a), was not

required to make recommendations, but provided 'policy-relevant findings and assessments that should be of assistance to all governments' (p.5) which are widely regarded as recommendations nonetheless. This report is notable because it did not confine its impact assessment to the minority population of 'problem gamblers' but discussed the impacts on the wider community as well. A follow-up report in 2010 (PC, 2010a) was more explicit with recommendations to Australian, state and territory governments. Among the recommendations made were mandatory pre-commitment, reducing the bet limit to lower the loss rate of high intensity gamblers, and changes to regulatory practices that include greater independence from government and increased community consultation. To date, in Victoria, most of the recommendations have not been implemented and expenditure on gambling has continued to grow. In 2013-14, $5.35 billion was lost on gambling in Victoria, with nearly half that amount ($2.5 billion) lost on poker machines, compared to $571 million lost on racing and $214 million lost on sports betting (Queensland Government Statistician, 2015).

Victorian government regulation of poker machines

In the decades before legalisation of poker machines in Victoria, governments led by both major parties resisted gambling industry pressure out of concern for the social impacts and the regulatory problems seen in New South Wales (McMillen & Wright, 2008). This was assisted by the Wilcox report (1983) commissioned to make recommendations on whether poker machines should be allowed into Victoria. The report was resounding in its recommendation that poker machines not be permitted. It found that the economic benefits of increased profits to gambling operators and a small increase in employment were outweighed by the impacts of increased criminal activity, the impact of drawing business away from other businesses, and the social impacts of excessive gambling, exacerbated by the nature and availability of the machines.

Poker machines were eventually legalised in Victoria in 1992 with the promise of increased jobs, increased social recreational facilities, funds for hospitals and clubs, and

an economic boost by retaining spending currently lost over the border to New South Wales clubs (Kirner, 2008). Losses on poker machines in 1992/93 were $255 million in the first year of operation, and by 2014/15 were $2.57 billion on 26,262 machines (Queensland Government Statistician's Office, 2016; Victorian Commission for Gambling and Liquor Regulation). In the first seven years of poker machines, Victorians went from spending about 1.3% of Household Disposable Income (HDI) on gambling in 1991 to 3.5% of HDI in 1998 (Australian Institute for Gambling Research, 1999). Over the same period there was a steady decline in expenditure on racing.

Some harm minimisation strategies were put in place, such as limiting the number of poker machines in the State and applying venue caps, but the Productivity Commission (1999b) criticised the Victorian government for the concentration of poker machines in lower socioeconomic areas, and its gambling regulatory arrangements which had conflicting objectives of both regulating and promoting gambling. The report also pointed out that governments face conflicting pressures of reducing the social harms of gambling, but also to expand gambling tax revenues.

Gambling in Victoria is currently regulated by the Victorian Commission for Gambling and Liquor Regulation (VCGLR), an independent statutory authority. As of June 2015, there were 27,091 licensed poker machines in Victoria, close to the maximum permitted under the *Gambling Regulation Act 2003* of 27,372 (Victorian Commission for Gambling and Liquor Regulation [VCGLR], 2015). Poker machines are found in 520 venues and, in accordance with the Act, are evenly divided between clubs and pubs, with 20% located outside Greater Melbourne. The municipal limit is ten per 1,000 adults, with some regional caps applied in particular areas where there is a high density of machines in areas of relative disadvantage (Gambling Information Resource Office, 2015).

Poker machines are a significant source of income for the Victorian government. In 2014/15 the Victorian government received over $1.6 billion in taxation levied on

gambling. Taxes paid on poker machines (not including the casino) were $962 million or 59% of the total gambling taxation revenue (VCGLR, 2015). An inquiry into the costs of problem gambling in Victoria found that the total of direct and indirect costs to the Victorian government was between $74 million and $147 million in 2010/11. The total cost to the Victorian community was estimated at $1.5 - $2.8 billion (Victorian Competition and Efficiency Commission, 2012).

There has been considerable opposition by local government in Victoria to the suitability of placing poker machines in local communities, but the rate of successful opposition is low. In 2014, there were 18 applications for increased poker machines at existing venues. Of these, nine applications were opposed by the relevant council. In each decision, the Victorian Commission for Gambling and Liquor Regulation (the regulator) found the application to have either positive benefit, or no net detriment to the community. Of the nine applications that were not opposed by the council, only one was refused by the regulator. In 2015, there were 17 applications for increased poker machines, with eight opposed by councils. Of the opposed applications, three were refused by the regulator. All of the remaining nine applications that were not opposed were granted.

The decisions to grant or refuse licences for poker machines are made by weighing up evidence of positive and negative economic and social impacts on the community. Licences are granted when the regulator is satisfied that the net economic and social impact of its approval will not be detrimental to the municipality in which they are located. However, there is no definition of 'no net detriment' provided by the *Gambling Regulation Act 2003* (Victorian Auditor-General, 2010).

The role of local government in poker machines

In Australia, decisions about poker machines in municipalities are generally made by the state authority. However, local government does have planning approval powers for

applications for new or extended venues, and the *Gambling Regulation Act 2003* confers the right for local government to make submissions on gaming licences to be considered as part of the decision process. There is no legal mechanism for community consultation other than the requirement for a gaming licence applicant to advertise in any newspaper that circulates in the local area. These advertisements are generally buried in the classifieds of a large metropolitan newspaper, and not in the local paper where they are more likely to be noticed. Local government's main influence is generally confined to its land-use planning approval powers, although these are very limited and do not take into account public health concerns. Planning refusals are frequently challenged by applicants with a high rate of successful appeals to the Victorian Civil and Administrative Tribunal (VCAT) (Brown, 2017; Livingstone & Francis, 2014a).

Under the Victorian Gambling Regulation Act 2003, applications for poker machines take place through two separate processes, a land-use planning application and an application to operate poker machines. A venue operator must apply to the local government authority for a planning permit and to the Victorian Commission for Gambling and Liquor Regulation (VCGLR) for approval of the premises as suitable to operate poker machines. The Victorian Gambling Act (s3.3.6) entitles local government to make a submission to the VCGLR addressing the social and economic impacts of gaming proposals in response to the application to operate poker machines. The relevant legislation and policy context for assessing the social and economic impacts of the proposal are section 3.3.7 of the *Gambling Regulation Act 2003,* section 24 and section 6 of the *Public Health and Wellbeing Act 2003,* and section 60.1 of the *Planning and Environment Act 1987.*

According to the *Gambling Regulation Act 2003* (s3.3.7(1)*:*

> (1) The Commission must not grant an application for approval of premises as suitable for gaming unless satisfied that -

> (c) the net economic and social impact of approval will not be detrimental to the well-being of the community of the municipal district in which the premises are located.

and

> (3) The Commission must also consider any submission made by the relevant responsible authority under section 3.3.6.

Councils are informed of the gaming licence application which includes the applicant's Social and Economic Impact Assessment (SEIA). The council then has 37 days in which to make their own assessment of the impacts, and advise the Commission of their intention to object or not, and a further 23 days to lodge a submission if they think the application should not be approved. The Commission has 60 days from the notice of no objection or date of the hearing in the case of submission, in which to make its decision.

The planning permit application to the council may be undertaken separately or concurrently with the gaming licence application. Given the high success rate of licensing approvals, venue operators tend to apply for their gaming licence either before or at the same time as the planning permit, taking advantage of the tight timeframe for council and commission responses to the gaming licence application. In making the decision on a planning permit for gaming, the council must refer to the *Planning and Environment Act 1987* (s60.1). Notably, this is different to an application for a liquor licence, for which a planning permit must be obtained first. Before deciding on a gambling application, the responsible authority must consider –

> (f) any significant social effects and economic effects which the responsible authority considers the use of development may have,

and clause 52.28 of the Victorian Planning Provisions which prohibits gaming venues from shopping areas. Some councils have amended their local planning scheme with a local planning policy on gambling which has been authorised by the Minister for Planning. A local planning policy may be more specific on land use applications of

gaming machines but is limited in how social and economic effects may be anticipated and measured.

When assessing the social and economic impacts of a gaming proposal, councils may have regard to the *Public Health and Wellbeing Act 2008*

> (s24) The function of a Council under this Act is to seek to protect, improve and promote public health and wellbeing within the municipal district by (a) creating an environment which supports the health of members of the local community and strengthens the capacity of the community and individuals to achieve better health.

and

> (s6) Precautionary principle: If a public health risk poses a serious threat, lack of full scientific certainty should not be used as a reason for postponing measures to prevent or control the public health risk.

Social and economic impact assessments by councils that point to a detrimental impact on community wellbeing of a gaming proposal are rarely upheld by the VCGLR, with the majority of council concerns rejected or outweighed by what the Commission views as community benefits. Of the 142 VCGLR decisions on gaming applications made between July 2007 and June 2014, only ten (6%) were refused (Livingstone & Francis, 2014a). Councils spend considerable resources on their right to make submissions on gaming licences. There are considerable costs associated with undertaking a social and economic impact assessment, opposing an application at the VCGLR, and sometimes again at the Victorian Civil Administrative Tribunal, if the Commission's decision is appealed. These costs, and the reasons for previous decisions by the VCGLR, are important considerations in the decision a council makes to oppose an application. The Victorian Competition and Efficiency Commission's inquiry into the costs of problem gambling (2012) found that councils spent between $1,000 and $285,000 on submissions (excluding officer time in some estimates). Council participation in proceedings cost a further $10,000 to $220,000, and the average cost of an appeal against a VCGLR decision to councils was $63,750.

In an effort to strengthen their decision-making position on poker machine gambling, some councils have adopted planning scheme amendments and gambling policies or strategies. A planning scheme amendment may guide council decision-making on applications by nominating preferred locations for gambling, and areas to be avoided. Social policies on gambling set out the socioeconomic conditions, expenditure and community benefits, community attitudes, and the known impacts on the community in preparation for proposed changes to the gambling environment. Nonetheless, even planning applications for gaming that are refused by councils may be overturned by appeal to VCAT.

Gambling in Victoria is justified as creating community benefits

As Delfabbro and King (2012) put it, gambling has gone from being an activity often viewed as 'a vice, a focus of criminal activity or form of glamorous extravagance', to 'a commodity which is sanctioned, taxed and regulated' (p.1556). Although the Victorian government does not explicitly set out its rationale for the introduction and expansion of poker machines, it is widely assumed that generating revenue, then dependence on that revenue, is the primary motivation (Doughney, 2006; Livingstone & Adams, 2011; Livingstone & Woolley, 2007; Orford, 2009; Sargent & Holmes, 2014). In some assessments of economic and social impacts of gambling, taxation revenue is considered a community benefit (Allen Consulting Group, Problem Gambling Research and Treatment Centre, & Social Research Centre, 2011).

However, when it comes to decisions about poker machines, they are sanctioned by the Victorian government because they are deemed to provide benefits to the community, and not for the taxation revenue they generate. In its annual report, the VCGLR describes its vision as 'Community-wide benefits to Victorians through the regulation of Victoria's gambling and liquor industries' (2015). Every gaming licence granted in Victoria has passed the regulatory 'no net detriment' test, in which community benefits were deemed to outweigh any negative impacts. The VCGLR information package

which guides local government submissions on gaming licences requires the submission to address several questions which the Commission views as community benefits (2015b). These include gaming expenditure, employment, investment in new buildings or renovations, supply contracts, complementary expenditures, tourism, and improved social, recreational, and entertainment opportunities.

The Productivity Commission (1999a) found that the 'production-side' benefits of expenditure, incomes, jobs and trade associated with expansion of the gambling industry have 'often been greatly exaggerated' (p.16). It argued that if the gambling industry were not permitted to expand, the money spent on gambling would have been spent elsewhere, creating similar levels of income and jobs. That report suggested the benefits of the gambling industry derived by consumers were twofold, being the enjoyment they get from gambling, and the access to a comfortable and safe social environment within the venue. A thematic review of VCGLR decisions found the most common themes consistently cited by the Commission when supporting applications were of an economic nature, being a commitment to undertake capital works, a commitment to make financial contributions to community purposes, and a commitment to increased employment with the applicant venue (Livingstone & Francis, 2014a).

One of the justifications often given for poker machines in club venues is that they provide significant support to community sporting and charitable activities, and in doing so, reduce the demand on government to fund these activities. However, Livingstone, Kapsaina, & Rintoul (2012) found that the support provided was miniscule in comparison to the amount of money lost by poker machine users within local communities, making poker machines an extremely inefficient and high cost method for funding community activities.

A direct benefit of poker machine gambling in Victoria is the funding it provides to the Community Support Fund (CSF) which is a statutory trust fund providing benefits to

those who can access the fund. However, the CSF does not have a high profile in the community (South Australian Centre for Economic Studies [SACES], 2005a) and there is no mechanism to ensure that the benefits from this fund are distributed equitably to the communities from where they came (Livingstone, 2001). The legislation allocates CSF funding to the Victorian Veterans Fund, the Victorian Responsible Gambling Foundation, drug education, treatment and rehabilitation, financial counselling, youth programs, sport and recreation programs, arts and tourism. Local governments have advocated to the Victorian government to return funding more equitably to the communities from where it originated in the form of losses on poker machines. For example, in a submission to Legislative Council of Victoria Select Committee on Gaming Licensing, Brimbank City Council requested fairer allocation of the Community Support Fund so that it is in proportion to local gaming expenditure and the related higher burden in those communities from which the funds were obtained (Brimbank City Council, 2007).

Club venues which provide 50% of Victoria's poker machines are considered to provide community benefits through their club activities and therefore exempted from providing funds to the CSF. However the wisdom of this arrangement is contested (Livingstone et al., 2012).

Community support fund and community benefit statements

The CSF receives a portion of the Victorian government's gambling taxation revenue. This portion is obtained from taxation on pub venues only (not the Casino or club venues) and is equivalent to 8.33% of the gaming machine expenditure in these venues. Club venues receive a tax concession of 8.33% provided they complete an annual Community Benefit Statement (CBS), demonstrating community contributions of an equivalent amount. In 2014/15 the CSF received $96.5 million, part of which was used to support the Victorian Responsible Gambling Foundation which provides treatment and support programs, community education, and research. The remaining funds are distributed to programs with an emphasis on problem gambling, drug treatment, financial

counselling, youth programs, sport and recreation, and arts and tourism, at the discretion of the government (Department of Treasury and Finance Victoria, 2015).

The Victorian government maintains a 50/50 ratio of poker machines in pubs and clubs, but clubs are exempt from 8.33% tax which goes to the CSF, on the basis they provide an equivalent 8.33% of expenditure directly to community benefits instead of paying that amount in tax. Under this system however, the criteria for community benefits is very broad, enabling clubs to legitimately claim up to 100% of its operating costs as community benefits, and minimise the necessity to make financial contributions to the benefit of those outside the club (VCGLR, 2013). An analysis of community benefit statements for 2013/14 found that only 6.8% ($18.5 million) of claimed community benefits was classed as 'donations, gifts and sponsorships' (Livingstone & Francis, 2014b). This arrangement has also been criticised by the Productivity Commission (2010a) as benefiting the club rather than the community.

The 'no net detriment' test

The *Gambling Regulation Act 2003* specifies that 'the net economic and social impact of approval will not be detrimental to the well-being of the community of the municipal district in which the premises are located' (s3.3.7(1c)). There are no other guidelines as to how economic and social benefits and detriments are measured or weighed against each other to determine 'no net detriment' to the community in which poker machines are proposed. Applicants are required to submit a social and economic impact assessment of their proposal, and these are likely constructed in such a way as to show the community benefits in the best light, and downplay any detriments. If the local authority decides to oppose the application, it is because their own assessment finds the social and economic costs outweigh any benefits. Local government has nothing to gain by opposing poker machine applications except the continued wellbeing of their community, but must decide if it is worthwhile to invest council funds in challenging the proposal.

In their decisions on poker machine venues or increases in the number of machines that are opposed by the local municipality, the Commissioners hearing the case consider a minimum of three impact assessments: the applicant's, the local authority's, and their own. They give certain weight to certain aspects of the application or opposing views, but there is no validated scale of measurement for these weightings. An analysis of 142 decisions found a degree of inconsistency and subjectivity, along with a quantitative bias toward the 'benefits' claimed by the applicant (Livingstone & Francis, 2014a). These decisions avoid weighing up the concept of community harms, preferring to use the word 'disbenefits' rather than 'disadvantage', 'harm' or 'loss'. Accepting a level of social harm as being outweighed by greater economic benefits, can pose a difficult dilemma for local government.

Community-based gambling is a public health issue

Gambling, not just problem gambling, is gaining acceptance by the Victorian government as a public health issue. The Victorian Responsible Gambling Foundation, a statutory authority, issued a background paper, *Using a public health approach in the prevention of gambling-related harm* (2015c) and have funded recent research taking a public health approach, including *Study of gambling and health in Victoria* (Hare, 2015) and *Assessing gambling-related harm in Victoria: a public health perspective* (Browne, et al., 2016). It is accepted that the rapid increase in gambling activity came about when poker machines were legalised and quickly established in clubs and pubs in local communities. Problem gambling among individuals is an obvious impact and a convenient population measurement, but is only a starting point when considering the impact on community wellbeing. It can be argued therefore, that community-based gambling in the way that it is currently delivered is the real public health issue, with problem gambling and its flow-on effects presenting as the manifestation of using a product that is designed to be addictive. This concept takes the public health approach of addressing an issue upstream by changing the environmental conditions rather than having to treat the

victims downstream. Analogies that are often used to describe the upstream approach are treating the water supply to prevent disease before it occurs, and building fences at clifftops rather than sending ambulances to the bottom. Recent examples of upstream primary prevention policies enforced by regulatory bodies are bans on smoking in indoor and outdoor public spaces to protect the community from the health impacts of second-hand tobacco smoke; enforcing earlier closing times in bars to reduce alcohol-fuelled violence; and in the United Kingdom, the introduction of a sugar tax to reduce obesity.

Although a legal activity, gambling is considered a risky or addictive consumption alongside alcohol and tobacco, which is why it is subject to government regulation. Gambling is positioned as a form of 'recreation' or 'entertainment', but it is the only form of recreation or entertainment which uses a formal process of 'self-exclusion' in which consumers voluntarily give venues permission to exclude or evict them as a way of addressing their gambling addiction. Self-exclusion programs are used across the world as the gambling industry's main response to problem gambling (Hing, Russell, Tolchard, & Nuske, 2015).

In the past, gambling has been considered an individual responsibility, but with increasing availability, can now be seen as a public health issue with outcomes that have impacts on communities (Korn, Gibbins, & Azmier, 2003). The Productivity Commission (2010a) put it this way:

> Problems experienced by gamblers are as much a consequence of the technology of the games, their accessibility and the nature and conduct of venues, as they are a consequence of the traits of the gamblers themselves (p.21).

The Productivity Commission (2010a) found that 40% of all losses on poker machines are from problem gamblers and a further 20% are from people at moderate risk of developing problems. Problem gambling has been linked to social harms such as crime, suicide, increased debt and relationship breakdown (PC, 1999a). These harms are not confined to individuals, with five to ten other people negatively affected by each person

having problems with gambling (PC, Productivity Commission, 1999a). As a result, the concept of harm minimisation came into public debate, along with a polarisation of views about the liberalisation of expansion of gambling as a form of recreation or entertainment. As the Productivity Commission (1999a) reported:

- On one side are those who support the expansion of gambling, as a source of economic benefits to the states or regions concerned and of entertainment value to consumers – who, it is argued, should be just as free to exercise choice in this area of their lives as any other.
- On the other side, are those who either deny that gambling yields any benefits to the economy or community, or who consider that the social costs and impacts on social values of the 'new gambling' outweigh any such benefits (p.5).

From the local government viewpoint, it is necessary to consider both sides of this debate within its roles of encouraging and facilitating local economic development, and of promoting (and preventing harm to) public health and wellbeing. Developing the local economy is an important role of local government, but we must also be mindful that poker machine venues in local community settings are not like casinos that are intended to attract customers from elsewhere. Poker machine venues are dependent on local trade. The Department of Justice *Study of problem gambling from a public health perspective* (2009) found that 54% of poker machine players travelled no more than five kilometres to a poker machine venue. Consequently, the catchment area of community-based venues is widely accepted by the VCGLR as comprising the residential areas within a five-kilometre radius of the venue. Several studies have found a link between proximity to poker machine venues and problem gambling (Barratt, Livingston, Matthews, & Clemens, 2014; Storer, Abbott, & Stubbs, 2009; Vasiliadis, Jackson, Christensen, & Francis, 2013; Welte, Wieczorek, Barnes, & Tidwell, 2006). Prevention or minimisation of harm from gambling using a public health perspective includes understanding the environmental determinants which include the accessibility and location of machines, and social aspects of a community that might encourage risky behaviour with poker machines, or protect against excessive use. Once installed, the primary minimisation of

harm from poker machines is largely in the hands of the venue operator through its responsible gambling codes of conduct, and the state government through its role as regulator. This situation is problematic because they are also the direct beneficiaries of the proceeds of the machines, and as has been shown, the majority of proceeds comes from people having problems with their gambling. Local government and concerned community groups rely on health promotion activities to inform local consumers and perhaps divert them to other activities, but have little influence over the upstream gambling environment.

Public health issues require government policies to address them as one of the key strategies to prevent harm. For example, the issue of family violence is currently changing from being viewed as a private matter to a public health issue. Public awareness raising and community activism gave rise to a Royal Commission into Family Violence which resulted in every one of its recommendations being adopted by the Victorian Government (State of Victoria, 2014-2016). This is an issue that is now addressed through national and state policies that implement primary prevention strategies such as addressing gender equity. The falling rates of smoking prevalence can be attributed to government policies that positioned environmental tobacco smoke as a significant risk to non-smokers, thereby reframing it as a public health issue (Korn et al., 2003). The Victorian Public Health and Wellbeing Plan 2015-2019 does not address gambling, although it does acknowledge that many municipal health and wellbeing plans do. Reducing harm is mentioned in the VCGLR's Strategic Plan 2015-18 (2015c), but it is not one of the strategic priorities, and has no goals, objectives or success measures. The Department of Justice *Taking action on problem gambling strategy 2006* was criticised by the Victorian Auditor-General (2010) for its lack of assessment and evaluation of problem gambling interventions.

The Victorian Responsible Gambling Foundation (the Foundation), funded by the CSF, has as its mission, 'a Victoria free from gambling-related harm', and has recently adopted

a public health framework (2015a). The public health approach focuses on prevention and early intervention, recognising that consumer education and treatment services are necessary, but that gambler behaviour is only one part of the problem (Victorian Local Governance Association, 2013). Addressing the determinants of problem gambling – including product safety, accessibility, venue features and government regulatory behaviour – are also required. The Foundation has no direct influence with the gambling regulator and is therefore limited in addressing some of the determinants, but it provides services and resources to local government to address the determinants of gambling issues in their municipalities. The Foundation has been influential in reducing the stigma associated with individual gambling problems by reframing the issue as a public health matter, even though their name does not necessarily reflect that.

'Responsible gambling' and 'problem gambling'

The 'responsible gambling' approach to gambling policy contrasts with the public health approach. The term implies that the responsibility lies with the consumer of the product and not the product itself (Livingstone & Woolley, 2007). The term is favoured by governments and the industry (Korn et al., 2003) and contributes to the normalisation of gambling as entertainment, in which responsible consumers are informed and self-controlled (Miller, Thomas, Smith, & Robinson, 2016). The term can even be perceived as promoting gambling. Some local governments have hesitated to participate in 'Responsible Gambling Week' activities because the concept does not necessarily concur with local government advocacy for product safety mechanisms on poker machines as recommended by the Productivity Commission reports. The promotion of responsible gambling accompanied by large posters and other materials depicting gambling activities could be misconstrued as councils' endorsement of gambling activities, or suggestion that these are safe activities.

In a similar way, the not-for-profit organisation, Drinkwise, which is funded by the Australian alcohol industry, urges consumers to 'drink responsibly' but does not provide

information on the national guidelines for alcohol consumption. Promoting the recommended maximum four standard drinks on one occasion to avoid short-term risk of harms would reduce profits from alcohol sales. In this regard, it may be the individual's choice to drink at a risky level, but once intoxicated, it becomes the venue's responsibility to refuse to serve that person, because intoxication poses risks to more than just the individual. If responsible service of alcohol was assured, the issues of alcohol-fuelled violence in entertainment precincts would be greatly reduced.

As with alcohol, it is a responsibility of gambling venues to serve the product responsibly. This takes the form of compulsory 'Responsible Service of Gaming' (RSG) training and conforming to a Venue Code of Conduct. Detection of gambling problems is different to detecting alcohol intoxication. The law is clear that venues must not permit an intoxicated person to use a poker machine. However, no definition is given to describe a point similar to intoxication where a person's risky gambling behaviour is no longer necessarily under their own control. Without the visible signs, it is easy to continue to assign responsibility with the gambler, and not with the venue. Livingstone and Adams (2010) put it this way:

> Without deployment of any means of detecting excess consumption, EGM gamblers can gamble regularly to the point of severe harm without any risk of this activity being curtailed. (p.4)

It is not until a gambler has taken the step of self-exclusion that venues become accountable for enforcing their own code of conduct. Even so, venues know their 'regulars', and it is well established that these people are providing the biggest proportion of revenue, and a significant proportion of these regulars are having problems with their gambling. Sixty percent of poker machine losses are from people who gamble on them weekly or more, while almost one in three of this group are having problems (classified as severe or moderate) with their gambling (PC, 2010a).

As for the responsibility of manufacturers of risky products, precedents have been set with plain packaging of tobacco and banning of alcoholic beverages that target underage drinking. But the product features of Australia's high intensity poker machines carry higher risks than those in most other countries yet are not regulated with the same degree of consumer protection (Delfabbro & King, 2012).

The Victorian Responsible Gambling Foundation (2016) define responsible gambling as follows:

> Responsible gambling for **individuals** means:
> - They may gamble for pleasure and entertainment but are aware of the likelihood of losing and understand the associated risks
> - They exercise control over their gambling activity
> - Responsible gambling occurs in balance with other activities in their lives and is not causing problems or harm for themselves or others
>
> Responsible gambling for the broader **community**, including gambling providers, governments, and sporting associations, requires:
> - Shared responsibility for generating awareness of the risks associated with gambling
> - Creating and promoting environments that prevent or minimise problem gambling
> - Being responsive to community concerns around gambling.

Although this definition associates some responsibility with governments, it is much more specific about the responsibility of individuals to be aware, controlled and balanced, and makes no mention of manufacturers or the provision of a product that is designed to be safe to use.

A common theme of the 'responsible gambling' discourse, particularly from the gambling industry, is the implied outcome of prevention of problem gambling (Miller et al., 2016). This suggests a level of comfort with a 'responsible gambling' policy as a preventative strategy (Livingstone & Woolley, 2007), and takes attention off for example a 'product safety' policy. By linking 'responsible gambling' with problem gambling prevalence, it

also reinforces the notion that problems with gambling only affects a very small proportion of the population that falls into the 'problem gambler' category.

The national definition of problem gambling put forward by Neal, Delfabbro, & O'Neil (2005) and adopted by the Australian Ministerial Council on Gambling, is useful in that it captures the impacts on others and the community:

> Problem Gambling is characterized by difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community (p.3).

This definition captures the wider impacts and is used to define problem gambling in Victorian population prevalence rates but it does not capture those below the measurement threshold who are also affected (PC, 2010a).

Prevalence in Victoria

Prevalence studies tend to focus on 'the identifying, counting and profiling' of pathological gambling in society (Young, 2013) and do little to evaluate the impacts of gambling on communities. However, measuring prevalence has been useful in bringing attention to gambling issues as a public health concern, and much can be drawn from changing behaviours over time. In 2014, a major study measured participation and problem gambling in Victoria. The *Study of Gambling and Health in Victoria* (Hare, 2015) compared findings with those of a 2008 survey published in *A Study of Gambling in Victoria – Problem Gambling from a Public Health Perspective* (Department of Justice, 2009). Participation in poker machine gambling declined from 21.46% in 2008 to 16.74% in 2014. The prevalence of problem gambling in adults in Victoria is 0.81%, or 35,600 people in 2014, compared 0.70% or 30,000 people in 2008. This is not a statistically significant change. The prevalence of moderate risk gamblers also did not change significantly (from 2.36% in 2008 to 2.79% or 122,500 people). But low-risk gambling increased from 5.7% in 2008 to 8.91% (391,000 people), and non-problem gamblers decreased from 64.31% in 2008 to 59.47% in 2014. Interestingly, nongamblers

increased from 26.93% in 2008 to 30.14% in 2014. Poker machines were the main gambling activity (66.58%) and highest spend activity (50.64%) for problem gamblers who gambled on them mostly in pubs (86.53%) and clubs (64.68%). There was an increase in frequency of poker machine gambling among problem gamblers from 56.37 times per year in 2008, to 87.61 times per year in 2014. Moderate risk gamblers increased their frequency of poker machine gambling from 22.73 times per year in 2008, to 86.24 times per year in 2014. This means that people having a degree of problems with their gambling are gambling more intensively on poker machines.

The study did not ask about the amount of money spent on gambling, just the highest spend activities. At the time of the first study, the total amount spent on poker machines in pubs and clubs in 2007/08 was $2.6 billion. This figure dropped slightly in 2013/14 to $2.5 billion when the second study was conducted. Over the same period as the four percent drop in expenditure, the participation rate dropped by 22% from 21.46% of the adult population to 16.74% of the population, meaning that a smaller group of poker machine users were experiencing larger losses. The VCGLR uses adult population to calculate per adult spend rates on poker machines which were $637 per adult in 2007/08 and $544 per adult in 2013/14 which reflects the population growth (from 4,094,364 adults in 2007/08 to 4,606,164 in 2013/14) as well as the lower overall expenditure. However, when comparing the population spend rates for just the proportion of the adult population who used poker machines, the spend rate increased from $2,972 on average per poker machine user in 2007/08 to $3,248 per user in 2013/14.

Vulnerable populations

One of the more startling statistics reported by the *Study of Gambling and Health in Victoria* (Hare, 2015) was the finding that among Indigenous Victorians, the rate of problem gambling was more than twelve times higher than for non-indigenous people (8.71% compared to 0.72%). Another demographic difference found about problem gamblers compared to non-problem gamblers, was that problem gamblers were more

likely to be unemployed. These are indicators that problem gambling is associated with disadvantage. We already know that disadvantaged communities contribute the highest expenditure on poker machines, as does the gambling industry, which targeted low income areas in which to locate their machines (Livingstone, 2001; Livingstone & Woolley, 2010).

More recently, poker machines are being established in growth areas. It can be assumed that the gambling industry is doing this to seek out new markets. However, a different kind of vulnerability to gambling problems may exist in growth areas. These areas are characterised by high mortgages, long commute times, few local entertainment choices, and lower social capital. The strength of community relationships, standards and networks that exist among individuals, groups and institutions is a risk factor for gambling (Messerlian, Derevensky, & Gupta, 2005).

Most people experiencing harms are not problem gamblers

The prevalence rate of problem gambling is very low, but many people are affected by gambling in a similar way to alcohol. The prevalence rate of alcoholism is relatively low, yet a large proportion of the population are affected by their own or someone else's drinking even on the odd occasion. Most people experiencing harms from gambling are not problem gamblers. As Young (2013) points out, even though we talk about the social harms of gambling, it is still most often measured using scales of individual pathological gambling to produce a population prevalence as the main indicator of harms. The Productivity Commission estimated that around seven people may be affected by another person's gambling (PC, 1999a). The Victorian Gambling Study found that 2.79% of adults reported experiencing problems because of someone else's gambling, which amounts to three to four people affected by another person's gambling (Hare, 2015). However, as the author suggests, gambling problems are often hidden from friends and family, and many may not be aware that gambling is having a negative impact on their

lives. Even among the problem gamblers in the study, less than half reported experiencing problems from their own gambling.

Being directly harmed by a close friend or relative is also not the only way to experience impacts from the exposure to problem gambling prevalence. Just knowing someone whose life is being affected by gambling has its own impact. In a Tasmanian prevalence study, 50% of people said they personally knew of someone who was having serious problems with gambling, and for 12.8% of those, that person was a family member (South Australian Centre for Economic Studies, 2008). Communities are also affected by the adverse impacts on individuals. While the initial impact on a gambler having problems is almost always financial, this leads to further problems that impact communities via indirect and direct routes. A report to the New Zealand Ministry of Health describes direct and indirect pathways where exposure to gambling opportunities in the community affects community wellbeing via prevalence of problem gambling (Wall, Peter, You, Mavoa, & Witten, 2010). Wall et al (2010) argued that the direct route leads from problem gambling to crime including fraud and domestic violence, whereas the indirect route leads to financial, emotional and social stress, to debt, transience, or poor parenting, leading to serious debt, school turnover, or lack of attachment. Both routes impact on sense of community through lack of involvement by those affected by problem gambling, which in turn, weaken social capital. A study that estimated the burden of harm from gambling problems (including problem, moderate and low-risk gambling) found that gambling has an impact on the community in the same class as depression and excessive alcohol consumption (Browne et al., 2016). Just as the impacts of excessive alcohol consumption are not measured by alcoholism alone, this study estimated the harms from gambling consumption, and not just 'problem gambling'.

Exposure to gambling in the face of community opposition is also considered a social harm. This disempowerment of communities can have a negative impact on a community's capacity to respond to harms from gambling and to actively build up general

resilience (Adams, 2008). Attitudes toward gambling and harm can be polarising to communities, particularly when a gambling licence application is under discussion (Browne et al., 2016). Community opposition has been considered sufficient reason to refuse poker machines in a small number decisions by the VCGLR (Livingstone & Francis, 2014a).

Taking in to account the emerging conceptualisations of gambling-related harm as a public health issue, Langham et al. (2016) proposed a definition of gambling-related harm:

> Any initial or exacerbated adverse consequence due to an engagement with gambling that leads to a decrement to the health or wellbeing of an individual, family unit, community or population (p.4).

This definition captures the many direct and indirect ways that a community may be impacted by gambling.

Local government action on poker machine gambling

Local government in Victoria has had little control over the 27,000 poker machines which have been wheeled in to community based venues over the past 20 years. It is known that gambling activity in communities follows the provision of gambling facilities, strongly suggesting that gambling is driven by supply rather than demand (Marshall, 2005; Productivity Commission, 1999a). Unlike the gambling industry and State government who are the major stakeholders in the success of the poker machine business, local government has no vested interest in poker machines and therefore takes a more objective overview of the impact of the machines in their communities. In this regard, the local authority is more likely to consider the social consequences of having poker machines in their communities, rather than locate the problem in the small minority who become 'problem consumers' (PC, 2010a). This means that local government might place responsibility for gambling exposure more with the provider of gambling, being both the industry and the State government as regulator, and less with the consumers who engage with poker machines as a form of recreation. It follows then that minimising

harm would logically lie with modifying the accessibility of the product, and the product itself to reduce the risk, rather than modifying or treating the behaviour of affected or vulnerable individuals. However, product modifications to date are minimal. The Victorian state government has reduced the maximum bet from $10 to $5, and introduced voluntary pre-commitment in 2015, but both are nowhere near the Productivity Commission recommendations of a $1 bet limit and mandatory pre-commitment.

Local authorities critical of the Victorian government's gambling policies have been well-organised in advocating for reform (McMillen & Wright, 2008). The Victorian Local Governance Association (VLGA) has an active and informed Local Government Working Group on Gambling who are active in participating in government consultations, building capacity in local government to respond to poker machine applications, and instrumental in commissioning and funding independent research on gambling issues. Campaigns supported by many local councils in Victoria include the 'no more pokies' campaign aimed at influencing both parties prior to the 2014 State election to address the concentration of poker machines in low-income suburbs. The members of the VLGA have been instrumental in supporting the newly started Alliance for Gambling Reform as a national advocacy group. Councils and community groups across Australia are joining this Alliance to advocate for changes to product safety as the most effective form of harm minimisation. The proactive response by these groups to prevent further community harms from poker machines demonstrate a public health approach to gambling.

These are our people

The introduction and uptake of poker machines in Melbourne has been described as a cultural phenomenon (Livingstone, 2001). They take huge losses from people who can least afford them, providing enormous revenues for gambling businesses, clubs and the government (Livingstone & Adams, 2011; Rintoul, Livingstone, Mellor, & Jolley, 2013). They were introduced by the Victorian government as a way out of its economic

difficulties, and presented as an acceptable form of recreation, even though no knowledge or skill is involved (Adams, 2008; Livingstone & Adams, 2011). Poker machines are designed to win and the more a person gambles on one, the more money they will lose (PC, 2010a). Poker machines were resisted by previous governments for a long time because studies were showing they were not worth the harm they would cause. However, they are here now, and any venue with a liquor licence or proposed venue may apply for a gaming licence.

Part of this cultural phenomenon was the belief in individual choice and responsibility with regard to gambling, but the sheer volume of expenditure, and the concentration of poker machines in areas of disadvantage has made it a public health phenomenon. Local government, as the local 'authority' has had very little influence over the influx of poker machines into their communities, and the preferences and concerns of communities they represent tend to be ignored. But local governments have to deal with the impact on their communities. Decisions on gaming licences are weighted toward applicants and there are no agreed criteria for assessing the positive and negative impacts of these machines. As one of my colleagues said recently, 'these are our people, and we should be able to protect them' (M. Roberts-Palmer, personal communication, 14 April 2016).

Literature Review

The present study attempts to detect any impacts of the introduction of poker machines to a local community that did not have any previously. Using a pre-post survey methodology, this research relies on the beliefs, opinions, attitudes and observations of the local people. But people respond to gambling issues in different ways, depending on how they frame gambling. Examples of traditional gambling frames have been illustrated by Korn (2003), which are summarised below:

- Gambling is a matter of individual freedom
- Gambling is a recreational activity, a form of entertainment
- Gambling is a major source of public revenue
- Gambling provides benefits of increased tourism and employment
- Gambling addiction is an individual rather than social pathology, and should be treated within a medical model like other mental disorders
- Gambling is part of our culture
- Gambling is seen within the context of *public* accountability, *public* responsibility, and *public* health. Because gambling is in the public domain … there is an incumbent responsibility for political leaders to be informed about the costs and benefits of gambling, and to be held publicly accountable for their policy choices (p.237).

The various traditional frames are preferred by different sectors engaged with gambling, particularly the poker machine industry. However, Korn argues that the public health frame, built on research, is better for capturing the key economic and social impacts of gambling.

A public health approach to this study reflects the local government concerns for the impacts on the community as a whole. The literature review has two parts. The first part

outlines the research on various types of impacts, outcomes and determinants in relation to community-based poker machine gambling that are important considerations for the study of the Greenridge community. The second part looks at the body of work, mostly commissioned by government agencies, that weighs up the benefits and harms of gambling, sometimes arriving at a net impact result. Some of these studies encompass the traditional gambling frames set out by Korn et al., (2003) to assess the impacts, and some are framed by a public health perspective. The choice of indicators and the research evidence for them have important implications for the way benefits and harms are viewed, measured and framed. These frameworks influence public policy and how decisions about poker machines in communities are made.

The costs and benefits of poker machines

Applications for gaming venues require a social and economic impact assessment that weighs up any beneficial impacts with any detriments affecting the particular community. Typically, the community benefits considered may include the provision of the venue itself, the entertainment provided by poker machines, employment and any contributions the venue may make to community organisations. The detriments considered may include gambling problems caused by increased accessibility and normalisation of gambling, as well as impacts on health and wellbeing, community opposition, and safety concerns due to increased crime or antisocial behaviour.

Poker machines as recreation and entertainment

Poker machines are offered as a form of entertainment or recreation in pubs and clubs as well as the casino in Victoria. In this way, they are seen as a benefit to those that use them. The enjoyment that recreational gamblers obtain from poker machines is accorded an economic value when weighing up of the benefits of costs of the product. Interestingly the Productivity Commission (1999a) found that expenditure on poker machines was not at the expense of other forms of gambling, but rather a new consumption at the expense of other consumptions or savings. This means that poker

machines have created a new market of consumers, particularly women, who have taken to gambling who were not previously gamblers (PC1999a).

The concept of poker machines as entertainment doesn't always sit comfortably, as although they may be harmless and fun for many people, they are the source of great distress for others. Surveys of gamblers show that the majority of people who gamble think gambling does more harm than good. Only 12.5% of the population has a positive attitude toward gambling (Donaldson et al., 2015). This is very low for a recreational activity (PC, 2010a). Poker machines have addictive qualities such as free spins and sounds and lights that give the appearance of a win when actually there was loss. There are widespread misunderstandings that losses can be recovered by continuing to play (chasing losses), and that machines run 'hot' or 'cold' (Huggett & McDonald, 2012; Livingstone, 2005; Livingstone & Woolley, 2007; Productivity Commission, 2010a; Thomas et al., 2010). These faulty beliefs can have the adverse consequences of people making spending decisions that significantly underestimate the price they are paying for the entertainment product.

For nongamblers, the provision of poker machines may mean that a pub or club has become more inviting or inclusive because of improved quality of the premises, live entertainment offerings, or subsidised meals (Marshall, 1998a; Productivity Commission, 2010a; South Australian Centre for Economic Studies, 2001, 2005a, 2008; Thomas, Lewis, McLeod, & Haycock, 2012). The Productivity Commission (2010a) found that clubs with poker machines offered more live entertainment than those without, probably because the poker machine revenue enabled them to fund more live entertainment. However, the opposite was true of pubs, with poker machines 'crowding out' other forms of entertainment such as live music, dancing and pool tables. Gambling venues are particularly attractive to women, pensioners and ethnic groups because of their welcoming, safe environment (Productivity Commission, 1999b; Rockloff et al., 2015; Saugeres, Thomas, Moore, & Bates, 2012; Thomas, Allen, & Phillips, 2009). Abbott et

al. found that casinos were attractive places for refugees and immigrants because they provided a safe, social setting in which to meet with compatriots that was not based on alcohol consumption or courting between men and women (Abbott et al., 2015).

Another benefit of poker machine venues is that they can use gambling revenue to reduce the cost of meals in an effort to attract more customers (SACES, 2001, 2005a), although this can have an impact on other local restaurants and cafes that cannot compete with the price subsidies offered by gambling venues (Pickernell, Keast, Brown, Yousefpour, & Miller, 2013). The accessibility of poker machine venues however, has implications for the development of gambling problems.

Accessibility of poker machines and gambling problems

When poker machines were first legalised in Australia, there were few restrictions on where they could be placed. Their widespread availability in venues provided for convenience gambling at a level unparalleled in the Western world (Young, 2010). Ideally, poker machine venues located in communities should be situated so they provide a destination for a conscious decision to gamble, and not in a position where they may provide for impulsive gambling. The Victorian Planning Scheme adopted this approach with an amendment to clause 52.28 that prohibits poker machines from shopping centres. However, this prohibition does not apply to venues permitted before October 2006, which means that in Victoria, there are many venues that are located within shopping centres.

The physical accessibility of poker machines is strongly associated with gambling expenditure (Marshall, 2005) and gambling expenditure is strongly associated with gambling harms (Markham, Young, & Doran, 2014; Markham, Young, & Doran, 2016; Vasiliadis et al., 2013). Young, Markham & Doran (2012b) found that geographically accessible locations for venues such as shopping centres were associated with higher levels of problem gambling. They also found that residential proximity was

independently associated with increased visitation, gambling participation and problem gambling. A gambling prevalence study conducted by the Victorian Department of Justice (2009) found that of those who used poker machines in the last year, over half travelled less than five kilometres to their preferred venue. Gamblers classified as problem gamblers, at moderate risk or low risk, all rated 'close to home' as the preferred feature of their favourite poker machine venues. This contrasts with non-problem gamblers who rated other venue features such as 'food quality' and 'social reasons' ahead of accessibility (Department of Justice, 2009). Compared to the other groups, problem gamblers were also more likely to report convenient opening hours as a favourite feature. The long opening hours of poker machine venues in Victoria (up to 20 hours per day) mean that some problem gamblers reported finding them a comforting oasis from problems, conflict or loneliness in the early hours of the morning (Thomas, Sullivan, & Allen, 2008).

The density of poker machines in a community also has an impact on the level of problems with gambling. Pearce, Mason, Hiscock & Day (2008) found that a higher density of gambling opportunities within a five kilometre radius of a neighbourhood was associated with a higher probability of gambling, and that people who lived closer to gaming venues were more likely to have gambling problems than those who lived further away. Storer, Abbott & Stubbs (2009) found strong evidence that the prevalence of problem gambling increases with the increasing density of poker machines at a rate of eight problem gamblers for every ten additional machines. This finding was supported by Barratt, Livingston, Matthews & Clemens (2014) who used help-seeking as a proxy for problem gambling to find a strong correlation between gaming machine density and rates of counselling for problem gambling.

Importantly, the density of poker machines has also been found to be concentrated in the most socioeconomically disadvantaged areas, where a disproportionate share of losses is carried by the most vulnerable populations (McMillen & Doran, 2006; Productivity

Commission, 1999a; Rintoul et al., 2013). Increased availability and accessibility are an important dimension of the normalisation of gambling (Bestman et al., 2016).

Normalisation of poker machine gambling

A risk of offering increased opportunities to gamble in the community is that the activity becomes legitimised or normalised as 'recreation' or 'entertainment' (Thomas et al., 2012). The ways that acceptance of gambling, as a normal form of entertainment, becomes harmful is difficult to measure. The concept of making money with no effort is thought to be encouraging of greed and idleness, which has been expressed as undermining work ethic, family values, healthy lifestyles, altruism, volunteerism and trust (PC, 1999a). In this way, a gambling culture can affect the feel and cohesion of a community. Surveys consistently show that public opinion is that gambling is harmful (McAllister, 2014; McMillen et al., 2004; Productivity Commission, 1999a).

The gambling industry works to normalise gambling by marketing poker machines as part of an exciting, glamorous night out (Thomas et al., 2012). Their marketing consistently implies that problems with gambling are due to aberrant or deviant individual problem gamblers, and not the product. In this way, gambling is presented as a desirable leisure pursuit, and it is the consumers who are problematic, not the recreation (Young, 2013).

Poker machines are an adult-only entertainment, and the product is not permitted to be marketed directly to underage audiences (Thomas et al., 2012). It is difficult to imagine any other adult-only entertainment venue actively encouraging families, yet poker machine venues often promote themselves as family friendly. They may provide many features such as subsidised meals and indoor play areas to attract families to the venue. But there is a risk that children are being used to attract their parents into gambling, or are being groomed as future adult poker machine gamblers by using deliberate marketing to normalise poker machine venues. An exploratory study of 'family-friendly'

poker machine venues in New South Wales found that marketing activities that targeted families and children used ‘shaping’, a marketing technique that changes consumer behaviour gradually through a sequence of intermediate steps leading up to the purchase of goods and services (Bestman et al., 2016). The authors suggest the ‘shaping’ strategies used by gambling venues normalise gambling environments for families and children, by first attracting families to venues for children to participate in free activities, which leads to parents entering the venue, which may then lead to parents gambling at the venue. Children exposed to gambling venues by families who consider these venues to be positive environments, may be more likely to gamble in adulthood. The steps involved in the shaping process are:

1. target children and families in promotions, such as special low cost or free children’s meals, child minding, under-18s disco, family prizes;
2. create rituals, norms, familiarity and preference for the venue, such as children’s parties, family celebrations such as Mother’s Day, loyalty programs;
3. normalise the club environment as a cultural and social setting, such as taglines like ‘supporting our local community’ or ‘supporting local sport’; and
4. normalise the club gambling environment.

These marketing strategies are thought to increase the likelihood that the venues will be normalised for children as positive environments and enable children to seamlessly transition into adult gambling activities. Furthermore, the sustained ‘family-friendly’ marketing may reinforce the community perception that poker machine venues are a suitable environment for children. This is significant for the study area because it is a new housing development zone, largely populated by young families.

The gambling behaviour of parents can influence children’s later behaviour. If children are raised in problem gambling families, they are more likely to develop gambling problems themselves (Dowling, 2014). A study of this issue found that participants with a family history of problem gambling were more likely to display problem gambling behaviour themselves (Dowling, Jackson, Thomas, & Frydenberg, 2010).

Impact on health and wellbeing

Gambling has been found to have an impact on health and wellbeing in a number of ways. It affects mental and physical health, but also has impacts on finances, family and relationship functioning, productivity as an employee, student or volunteer, and involvement in crime or perception of safety.

The activity itself is a sedentary behaviour, which contributes to a number of chronic diseases (Langham et al., 2016). A study which compared similar communities in Victoria (with poker machines) and Western Australia (without poker machines) found that Western Australians were more likely to participate in active outdoor pursuits, and much less likely to visit pubs and licensed clubs (SACES, 2005a).

There are strong links between gambling and mental health conditions such as depression and anxiety (Abdollahnejad, Delfabbro, & Denson, 2014; Black, Shaw, McCormick, & Allen, 2013; Lorains, Cowlishaw, & Thomas, 2011; Morasco, Vom Eigen, & Petry, 2006). Morasco et al. (2006) found a high prevalence of problem gambling among patients in an urban primary health care setting (15%) and a significant relationship between gambling severity and health functioning. Pathological gamblers reported the poorest mental and physical health, and even recreational (non-problem) gamblers reported poorer health than nongamblers. In a comparison of people with severe gambling problems (pathological gambling disorder) to a matched control group of people without gambling problems, Black et al. (2013) found that people with gambling problems were at increased risk for chronic medical conditions and obesity. They were more likely to have poorer health related lifestyle choices, including smoking, avoiding exercise, and longer hours of television watching.

Large prevalence studies have also found comorbidities between gambling problems and health. The Productivity Commission (PC, 1999a) found that among problem gamblers, 58% had experienced depression due to their gambling compared with 2.1% of the

general population, and 9.2% seriously considered suicide because of their gambling compared with 0.3% of the general population. The Victorian prevalence study conducted in 2008 found that problem gamblers reported poorer health outcomes than non-problem gamblers (Department of Justice, 2009). Self-reported poor health was reported by 16.8% of problem gamblers compared with 3.4% of non-problem gamblers; and 52% of problem gamblers reported having depression compared with 8% of non-problem gamblers. The study also found that problem gamblers were more likely than non-problem gamblers to be experiencing diabetes, lung conditions, anxiety disorders, and obesity. Severe psychological distress was reported by 24% of problem gamblers compared with 1.4% of non-problem gamblers. This study also found 23% of all gamblers and 32% of problem gamblers believed their gambling had increased as a result of a major injury or illness to either themselves or someone close.

No causal relationship between gambling and health outcomes is suggested by these studies. A limitation of these studies is that they rely on problem gambling screens to categorise respondents into levels of risk. A different approach was taken by a New Zealand study that considered the impact of the amount of money and time spent on gambling, on quality of life (Lin et al., 2010). A loss to income ratio was used to determine heavy gambling in relation to income, and this proved to be a sensitive measure for most domains of wellbeing. People with higher relative gambling losses reported significantly poorer physical health, mental wellbeing, relationships with family/friends, feelings about self, quality of life, satisfaction with life, and study/training performance. When considering the amount of time spent gambling on poker machines, the impacts depended on the setting. Time spent on poker machines in clubs was associated with poor physical health, but in the pub setting, it was associated with reduced quality of life and criminal behaviour, as well as reduced physical activity.

A recent Victorian study also used quality of life domains to understand the health impacts of gambling on the community (Browne et al., 2016). Drawing on a taxonomy of

harms and the Victorian prevalence statistics, Browne et al. calculated the overall burden of harm from gambling, in comparison to other common health conditions. The public health model of disease burden was used to give context to the many impacts and co-occurring conditions associated with gambling in Victoria. Using public health methodology, the impacts found in the Victorian prevalence study were supplemented by qualitative measures estimated in terms of health-related quality of life (HRQL) and disability-adjusted life years (DALYs). These measures put the various degrees of gambling risk on a scale that allows comparison with other health states. The results demonstrated that a large contribution of harm from gambling is attributable to 'low risk' gamblers. This is because although there is a lower individual level of harm, this low-level harm is affecting a sizeable population. In terms of the absolute scale of harms from gambling to the Victorian community, the burden of harm was substantial, approaching the level of major depressive disorders and alcohol use and dependency, and far greater than most of the other common health conditions computed.

Financial impacts

Losing more money than intended on poker machines is one of the most immediate harms from gambling, and is included in the widely-accepted definition of problem gambling:

> Problem gambling is characterised by difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community (Neal et al., 2005).

Household expenditure on gambling increased rapidly after the introduction of poker machines in Victoria (SACES, 2005b). The financial impacts of problem gambling mean that in some households, gambling expenditure is diverted from personal or household needs, reducing the standard of living. It is widely acknowledged that poker machines extract the highest losses from the poorest communities (Productivity Commission, 1999a, 2010a; South Australian Centre for Economic Studies, 2008). Financial instability can tip people into a cycle of poverty and even bankruptcy or homelessness, which

makes this one of the top triggers for seeking help (Hare, 2015). In the 2015 prevalence study of Victoria, 63% of problem gamblers named financial problems as the top reason to seek help, 73% reported that their gambling was causing them financial problems, and 61% reported borrowing money or selling something to get money to gamble. As Neal et al. (2005) suggest, financial problems are just the start of a series of adverse impacts from gambling that are interrelated.

Impact on relationships

The impacts on relationships can occur when there is disagreement about gambling which can lead to lying and lack of trust, to conflict and breakdown. It has been estimated that a person with a gambling problem negatively affects at least seven other people (Productivity Commission, 1999a; Victorian Competition and Efficiency Commission, 2012). These can include parents, children, partners, siblings, close friends and work colleagues. The damage to relationships from gambling can be an outcome of gambling or it can be a determinant of other harms (Browne et al., 2016). The pressures on relationships from gambling are due to lack of trust, lying, arguments, and financial stresses (PC, 1999a).

Relationship concerns are among the top triggers for help-seeking among problem gamblers, after financial problems and feeling depressed or worried (Hare, 2015). Gambling is also seen as an escape from relationship problems or even a safe place to escape from violence or the threat of violence (Huggett & McDonald, 2012). Dowling et al. (2015) found that half of people with gambling problems (56%) reported perpetrating physical violence against their children. Between one-third and one-half of people with gambling problems and their family members report being victims of some form of family violence. Current partners and former partners were the most common perpetrators and victims of gambling related family violence (Suomi et al., 2013). Markham, Doran & Young (2016) analysed postcode level police reports of family violence and found there

was a relationship to poker machine density, with more family violence incidents reported in areas of higher poker machine accessibility.

In terms of the cost of relationship breakdowns to the community, Browne et al. (2016) found ongoing consequences including social isolation, maladaptive behaviours, emotional distress and life course and intergenerational harms, which lead to damage done to social cohesion and social capital through isolation or exclusion of individuals or groups.

Impact on productivity

People seeking help for gambling have explained how their preoccupation with gambling has impacted on their ability to carry out their jobs (PC, 1999a). Problem gamblers reported more job losses and decline in work performance than those without gambling problems. The problems from the perspective of the workplace were a loss of trust from others and lowered concentration. The experience of employment loss exacerbates the financial harms already experienced and has a long-term impact in terms of gaining future employment (Langham et al., 2016). The rate of volunteering is also lower among people with gambling problems (Billi, Stone, Marden, & Yeung, 2014).

Crime and safety

Gambling has long been connected with organised crime, but research has shown that some people commit crimes because of their gambling, in particular to finance their gambling habits once their legitimate sources of funds are exhausted (PC, 2010b). The Productivity Commission's survey of counselling clients found that 40% of problem gambling help-seekers had committed a gambling related crime at some point during their gambling careers. This survey also found that the probability of committing a crime increased with the size of the debt. A common pattern that leads the gambler to crime is mounting debts that cannot be serviced; the inability to borrow more money by legitimate means, leading to theft or fraud, including welfare fraud, to obtain more money to gamble; hoping for a win to repay the debts (Productivity Commission, 1999a). These

crimes often begin at home with stealing from family and friends then extending to the workplace and beyond (PC, 1999c).

To test the level of these income-generating crimes which are often associated with gambling problems, Wheeler, Round and Wilson (2011) examined the relationship of crime with poker machine expenditure in localised areas of Melbourne, Victoria over time. Gambling expenditure on poker machines was significantly and strongly associated with crime, particularly income-generating crime from 1996 to 2006.

Although income-generating crimes are not usually violent crimes, there is an association between increased gambling related debt and community activities such as pawn shops, and payday lenders or instant loan providers (South Australian Centre for Economic Studies, 2005a; Thomas & Lewis, 2012). Increases in poker machine venues, and gambling related debt is also associated with increases in demand from emergency relief providers and welfare services (Marshall, 1998b; Productivity Commission, 1999a; South Australian Centre for Economic Studies, 2005a, 2008).

Community attitudes

Not long after the legalisation of poker machines in Victoria, the Productivity Commission undertook extensive research into the impacts of the increase in gambling. It found that 70% of Australians thought gambling did more harm than good, and only 32% thought that gambling provided more opportunities for recreational enjoyment (PC, 1999a). A major study of attitudes toward gambling in Victoria conducted in 2003 found 85.1% of people thought that gambling was a serious social problem and 76.3% thought that gambling was too accessible (McMillen et al., 2004). Other studies have consistently found similar results in Tasmania, Australian Capital Territory (ACT) and Northern Territory (Davidson & Rodgers, 2010; South Australian Centre for Economic Studies, 2008; Young et al., 2006).

The Productivity Commission also acknowledges that there is a certain discomfort for many people who see gambling as harmful, and the opposite may be true for those who might feel good about gambling as it supports the services provided by the government share of the losses. The extent that people feel good or bad about the existence of gambling results in 'external psychological benefits or costs' (p.10.23). However, the Productivity Commission did not find the psychological cost of the existence of gambling to be significant compared to other costs and benefits of gambling.

Given that community attitudes or values about gambling are so strong, it leaves a question as to why they are not taken into account more in decisions about poker machines. The Productivity Commission noted that while a blanket ban on all gambling is not feasible, a selective ban on community based poker machines, as in Western Australia, depends on community preferences and the magnitude and distribution of costs and benefits (PC, 1999b).

Decisions to refuse poker machines are rare, and even more so based on community opposition, however there have been a few cases. Community aversion to poker machines was taken into account in the Supreme Court of Victoria decision on the Romsey Hotel case: 'if approval is likely to cause unhappiness or discontent in that community…that consequence is a social impact of approval which will be detrimental to the wellbeing of the community ("Macedon Ranges Shire Council v Romsey Hotel Pty Ltd & Anor (2008) VSCA 45 ", 2008). In another case, the decision of the Beach Hotel Jan Juc hearing of the Victorian Commission for Gambling Regulation ("The Beach Hotel Jan Juc Pty Ltd for approval of premises as suitable for gaming with 30 gaming machines," 4 October 2010), stated 'the Commission is satisfied if the application were granted it would result in a sense of discontent or unhappiness in a significant part of the Jan Juc community and would be detrimental to its sense of wellbeing'.

Employment

Employment is often cited by the gambling industry as an economic benefit (PC, 1999a). Creating additional employment is one of the most commonly cited reasons by the VCGLR for granting poker machine licences (Livingstone & Francis, 2014a). However, the Productivity Commission (2010a) found that employment provides negligible net economic benefit overall. Although the gambling industry employs many people, it does not create new employment, but creates a shift of employment from other sectors. A comparison study between Western Australia (WA), which does not have community based poker machines, and Victoria, found that WA had a higher average number of employees per restaurant/café than Victoria. But the number of employees in licensed premises was higher in Victoria than in WA, likely due to added poker machine facilities. This demonstrates the shift between sectors rather than increased employment overall (SACES, 2005a).

Community contributions

Cash or in kind contributions to the community by poker machine venues are usually seen as a benefit of gambling, and is an important consideration in the assessment of positive and negative impacts on the community. There has been little research into the value of community contributions that are over and above legislative requirements. In Victoria, club venues are required to make contributions to the community in exchange for certain tax concessions, but these tend to be made in a variety of ways that include discounts, venue improvements, and in kind contributions, with cash contributions tending to be fairly minimal (Livingstone, Francis, & Wynen, 2015; Livingstone et al., 2012). Hotel venues are not generally obliged to make any contributions to the community, but many hotels in Australia have traditionally provided small grants to local sporting clubs, community groups and charities, as well as provided free meeting facilities and other benefits, regardless of whether they have poker machines. These are provided as a gesture of goodwill and in the case of sports clubs and community groups,

encourages reciprocity among members of these groups who in turn, patronise the hotel with their meal and beverage purchases.

Applications for poker machines now frequently include a voluntary amount of money to be provided annually in the form of direct contributions to community, often requiring the local council to get involved in the distribution of funds. Usually, the amount is an arbitrary figure calculated to give weight to the 'no net detriment' test as a benefit of the application. Sometimes the figure is offered for a fixed period of time, or it can be ongoing. This aspect of an application can also be subject to negotiation, with applicants sometimes increasing the offer during the hearing process.

While community contributions may seem to be an indisputable benefit, there is no evidence that they have a beneficial impact on community wellbeing. A good proportion of community contributions goes toward sport, but this has not been shown to increase participation in sport as a result (PC, 2010a). Furthermore, the contributions may not remain in the local area. For example, some major league football clubs redirect the community contributions of their poker machine venues located in outer suburban areas, to benefit their inner-city based clubs (Livingstone et al., 2015). Another area of contributions favoured by gambling venues is for problem gambling treatment or initiatives to prevent problem gambling, however there is no evidence this provision has had any impact on the prevalence rate for problem gambling. The increased ability of gambling venues to donate money to community groups or raise money for their own club provides justification for poker machines. However, this can mean that some sectors of the community enjoy the benefits at the expense of others who experience harm (Greenslade, 2013).

Frameworks for assessing the impacts of poker machine gambling

Criticism of the harmful effects of poker machines has brought about some large-scale impact assessments. However, there has been much debate about how the effects, both intended and unintended, are measured, whether positive or negative, and how much

weight should be given to each aspect. It is apparent that the vested interests of the industry and government as the two biggest beneficiaries of poker machine losses are going to exert influence over this process, and this forms part of the political struggle for gambling to be recognised as a public issue, rather than a personal one (McDonald, 2009). It is important to get impact assessment right if harm from poker machines is to be prevented. This is of particular importance when a growing level of harm is to be considered acceptable if it does not outweigh the benefits to be accrued. In the interest of reducing health inequity, it is fundamental that any benefits to the wider community through tax revenue, are not at the expense of those least able to make this contribution.

Local government has long argued for interventions to make poker machines safer to use, and for councils to have more decision-making power over the number and location of machines, based on research-based social and economic impact assessments (Brown, 2013; Greenslade, 2013; McMillen & Wright, 2008; Productivity Commission, 1999a, 2010a). In its study of Victorian and Western Australian communities, the South Australian Centre for Economic Studies (2005a) recommended that state and local government jointly develop a consistent set of social and economic gambling indicators that can be regularly collected and reported. This however, has not happened. To date, there has been no state and local government jointly developed set of gambling indicators in Victoria. The Victorian Auditor General also recommended that the Victorian Commission for Gambling Regulation (as it was called in 2010) should further develop its template for social and economic impact assessments, and develop a set of principles on which net detriment can be assessed (2010). Although there were some modifications to the submission form for social and economic impact assessments, the data requested was largely unobtainable, suggesting there is still a need for jointly developed gambling indicators.

In applying a test of net impact on a community, a variety of different methodologies and different indicators have been used. Large population frameworks to compare the costs

and benefits of gambling have been devised by economists who determine a list of inputs and work out a dollar value for each. This works well for the economic benefits side of the equation because they are expressed in monetary terms anyway. Social costs however are felt in terms of damage to individual, family, and community functioning and wellbeing – something that may be as carefully built up as a savings account, or may already be tenuous because of existing inequities and hardships. However, to make the cost benefit analysis useful, a price must be allocated to gambling-related emotional distress, relationship breakups, family violence, depression and suicide. This may be done by applying amounts obtained from compensation payment schedules (PC, 1999a).

The Productivity Commission measured both costs and benefits of the gambling industry in its report of 1999. A benefit estimate was obtained by summing the benefit to gamblers using 'consumer surplus' methodology and government revenue, then deducting the consumer loss for excessive spending by problem gamblers, resulting in a net benefit estimate (PC, 1999a). The consumer surplus refers to the extra value that consumers derive from a product, in this case the enjoyment of playing a poker machine, expressed as a measure of consumers' preparedness to pay over and above the cost purchasing the product. The cost of problem gambling was estimated by allocating a monetary value to a range of impacts categorised as financial, productivity and employment, crime and legal, personal and family, and treatment costs. This report also disaggregated the costs and benefits by gambling type. It found the net consumer benefits of poker machine gambling was $1.62 - $2.49 billion, and the social cost was $1.37 - $4.25 billion, resulting in a net benefit of ($2.6) - $1.1 billion. This meant that in 1997-98, the poker machine gambling industry in Australia could have been delivering an overall net cost or net benefit depending on how much weight is given to the various impacts.

In 2010, the Productivity Commission again estimated the costs and benefits of gambling using the same framework it devised in 1999, but this time using a more conservative approach. The same framework was used, only this time the consumer loss for excess spending was moved to the 'cost' side of the equation instead of being deducted from the 'benefit' side. The doubling of spending on gambling between the two studies increased the tax and consumer benefits, while the costs of problem gambling (including excess spending) were estimated to stay about the same. This time, when considering poker machine gambling only, the cost benefit analysis produced an overall benefit of $768 million - $5.56 billion in 2008-09.

In 2008, the South Australian Centre for Economic Studies (SACES) carried out an economic and social impact assessment of gambling in Tasmania, an undertaking which is mandated by the Tasmanian *Gaming Control Act 1993* to be conducted every three years. The terms of reference required that the study should quantify and assess the broad social impacts of gambling. A cost benefit framework similar to the Productivity Commission methodology was used, allocating values to the economic benefits of consumer surplus and taxation revenue and deducting values for the social costs of problem gambling (excess expenditure by problem gamblers and social costs of problem gambling). This report also investigated other potential economic benefits of increased economic activity, namely investment, employment, and tourism, but found no economic benefit from these. The net impact of all types of gambling in Tasmania in 2007 was found to be in the range of $62.7 - $75.5 million.

The subsequent gambling impact study in Tasmania was undertaken by a consortium led by Allen Consulting in 2010. This study also used the same framework originally used by the Productivity Commission, but added a new economic benefit item to take account of the benefits accruing to gambling providers, referred to as Producer Surplus (Allen Consulting Group et al., 2011). This report avoids estimating the net benefit of gambling in Tasmania and insists, 'readers should not attempt to draw such conclusions by

subtracting estimates of total costs from total benefits' (p.116). This is because of the uncertainty of the accuracy of key inputs. Nonetheless, curiosity makes it impossible not to do so, especially as other analyses using similar frameworks have done that final calculation. The net economic benefit of poker machines, calculated by adding up the benefit amounts of consumer surplus, producer surplus, taxation and community benefits, then deducting the consumer loss for excessive spending by problem gamblers, resulted in a net benefit estimate of $80.7 – $106.9 million. The costs associated with problem gambling on poker machines were estimated at $30.7 - $153.3. Subtracting the estimated costs from benefits, results in a net contribution of ($103.3) - $69.9 million. If the benefits to the poker machine industry (calculated as $56.2 million producer surplus) were excluded as has been in all of the above studies, it would be hard to find any positive contribution from poker machines in Tasmania as the range would then be at worst, a net cost of $159.5 million, and at best, a net benefit of $13.7 million.

The Victorian Competition and Efficiency Commission (VCEC) conducted an inquiry into the costs of problem gambling in 2012. The rationale for the inquiry acknowledged that the Victorian government was a beneficiary of the gambling industry through licensing and taxation, 'while the costs created by problem gambling fall on governments, community organisations, employers, families and individuals' (Victorian Competition and Efficiency Commission, 2012). The aim was to inform policy makers and the community about the true costs of problem gambling and where they fall, to help reduce problem gambling and increase the net benefit from the conduct of gambling for all Victorians. The report has several limitations. There was no primary research undertaken and not all impacts could be quantified. The resulting report did count the cost of assessing poker machine venue applications to local government, although it discounted the costs incurred by local government by 50% to reflect the costs of 'problem gambling' rather than 'gambling'. It also included the cost of social services (other than Gamblers Help) resulting from problem gambling, at the suggestion of local government. Working within

its terms of reference, the report only estimated the cost of providing specific problem gambling services; costs associated with impacts on mental and physical wellbeing; costs to the justice system, costs to business, and indirect costs on the social welfare system. Although the report refers to 'mental and physical wellbeing', this was translated into costs for emotional distress, and not physical health impacts. The total economic and social costs were found to be $1.5 - $2.8 billion in Victoria in 2010-11. Economic or social benefits were not estimated, and therefore no net figure was produced.

A summary of the inputs making up the framework for the cost benefit method of assessing the impact of gambling in studies discussed is shown in Table 1.

Table 1. Framework for cost benefit analysis by selected Australian studies

Key inputs	PC 1999	SACES 2008	PC 2010	Allen Cons. 2011	VCEC 2012
Costs					
Cost of excess expenditure	Y	Y	Y	Y	Y
Govt policy regulation, research, education					Y
Govt funded gambling counselling	Y	Y	Y	Y	Y
Govt health & human service cost					Y
Justice system	Y	Y	Y	Y	Y
Productivity loss at work	Y	Y	Y	Y	Y
Job change	Y	Y	Y	Y	Y
Productivity loss outside work	Y	Y	Y	Y	Y
Bankruptcy	Y	Y	Y	Y	Y
Emotional distress to family	Y	Y	Y	Y	Y
Relationship breakups	Y	Y	Y	Y	Y
Divorce – financial and emotional costs	Y	Y	Y	Y	Y
Cost of violence	Y	Y	Y	Y	Y
Depression	Y	Y	Y	Y	Y
Suicide – ideation and attempted	Y	Y	Y	Y	Y
Benefits					
Consumer surplus for recreational gamblers	Y	Y	Y	Y	Y
Tax, licences, community contributions	Y	Y	Y	Y	Y
Producer surplus				Y	

A limitation of cost benefit analyses is that they rely on problem gambling prevalence rates and calculate the costs to individuals and their families who screened for problem

gambling behaviour. Therefore, they don't take account of a range of impacts that are happening in local communities. These measures are important to our understanding of gambling behaviour, but as a health behaviour, problem gambling should be considered a risk factor and not an outcome (Langham et al., 2016).

In contrast to the cost benefit approach which allocates a price to economic and social costs, SACES took a different approach to assessing the impact of poker machines (2005a). This study matched regions in Victoria with regions in Western Australia and compared indicators between them to ascertain the difference made by the presence of poker machines. The difference between regions in the two states is that in Victoria the selected regions had access to 'convenience' gambling with several venues close to home, whereas in WA 'destination' gambling is provided in just one casino. The Western Australian government has not liberalised poker machines, and remains the only state that restricts poker machines to a single casino. This study used a multi-method approach to assess the impact of poker machines on communities. These included quantitative and qualitative methods, primary and secondary data sources, and involved local communities through focus groups.

The dimensions to be included in this study were:

- Gambling environment
- Patterns of gambling
- Local economies and labour market profiles
- Patterns of usage of community support services including gamblers help
- Health status
- Food assistance and emergency relief
- Patterns of suicide, family breakdown, divorce and use of family services
- Incidence of homelessness and alcohol abuse
- Gambling related crime
- Quality of life, social networks, recreational activity and non-work leisure patterns, levels of household expenditure and debt.

The researchers found limitations in some of the indicator data they wanted to use. These included that some impacts are deliberately hidden out of shame, guilt or legal implications; problem gambling is often associated with other life events (comorbidity),

and some information and data sets were not available at the smaller local government level or did not include association with gambling. Issues like demand for emergency relief, homelessness and crime were not necessarily linked to gambling because it was not a data point that was collected.

Some of the indicators examined related to employment, community attitudes, problem gambling, health impacts, crime, community funding, the impact on charities, and the role of pawnbrokers and second-hand dealers. Existing data showed higher expenditure and higher rates of problem gambling in the Victorian regions compared to WA. Some of the impacts on communities found were a much higher proportion of new clients attending gambling counselling services in Victoria (13.4 times above that of WA); GPs in Victoria were four times more likely to identify patients with gambling related health issues; clubs with poker machines experienced much higher growth than those without; and employment growth did not keep up with gambling growth. This impact approach is a much better fit with the public health approach to gambling because it focusses on the impact on the community as a whole, and not just on the issue of 'problem gambling'.

Langham et al. (2016) proposed a taxonomy of harms within a framework that conceptualises the dimensions of harm as experienced by individuals and communities that are engaged with gambling but not necessarily participants in gambling; as distinct from problem gambling behaviour. To explain this, the authors proposed a definition of gambling related harm as:

> Any initial or exacerbated adverse consequence due to an engagement with gambling that leads to a decrement to the health and wellbeing of an individual, family unit, community or population (p.4).

The framework describes the depth and extent of harms as experienced by (1) people who gamble, (2) affected others of people who gamble, and (3) communities, for example community harm can be increased poverty, increased need for welfare support, increased burden of disease due to psychological distress, or decreased volunteering. There are seven dimensions of harm classified as:

- financial harm
- relationship disruption, conflict or breakdown
- emotional or psychological distress
- decrements to health
- cultural harm
- reduced performance at work or study
- criminal activity.

With the exception of cultural harm, these classifications are similar to those used in the cost benefit studies identified above. But the way their impact is analysed is very different. Apart from describing the impact on the person who gambles, the affected others of the person who gambles, and the community; the impacts of these dimensions are also described in terms of their impacts over time. First, 'general harms' that might occur from someone having initial engagement with gambling through to reaching a point of significance, such as relationship problems, or erosion of savings. Second, 'crisis harms' when harms become significant enough to motivate help-seeking or change, often experienced as a crisis point, such as loss of major assets, relationship, or suicidal ideation. Third, 'legacy harms' when previous engagement with gambling has left a legacy of harms such as ongoing financial hardship or social isolation due to relationship breakdown. Finally, 'lifecourse and intergenerational harms' as both a temporal category and classification of harm, when the pervasiveness of legacy harms leads to harms that affect the lifecourse and even other generations, such as loss of financial security, homelessness, and estrangement from family. Because of its public health approach, this framework provides more promising indicators for local government assessments of the community impacts of poker machines than the economic frameworks used to quantify impacts for large populations.

Applying assessment frameworks to the local government or community levels

Local governments are most likely to conduct social and economic impact assessments of gambling, particularly poker machines, when developing a policy on gambling or when making an assessment in response to a planning or licensing application for poker

machines. There are no agreed frameworks or indicators for assessing benefits and harms at the community level, and national or state level frameworks have less relevance at this level. From a community point of view, we know that the real benefits are enjoyed by the poker machine operators and the state government, with very little if any of state government revenue flowing back to the same community from where it came. In its first report *Australia's Gambling Industries*, the Productivity Commission acknowledged that their highly aggregated national figures were of limited usefulness for policy, saying 'there are likely to be considerable differences in net outcomes among the states and territories and, in particular, at the regional or local government levels, especially when tax flows are taken into account' (1999a). We also know harm from poker machines in particular is concentrated where they are located, which is in the community. Young, Markham, and Doran (2012a) found that increased accessibility of poker machines, particularly in proximity to supermarkets was associated with increased rates of problem gambling in local communities. Furthermore, Markham, Young and Doran (2014) found that increased per capita expenditure on poker machines was also associated with increased rates of problem gambling.

When it comes to making submissions objecting to poker machine licence applications, the VCGLR is highly prescriptive in its approved submission form for local governments objecting to the granting of a gaming licence. The data requested represents a very narrow view of impact assessment, and does not include community consultation, or even gambling prevalence. This form requests that information that is likely to be considered benefits are extracted from the applicant's Social and Economic Impact Assessment (SEIA) and stated as fact. This information relates to evidence the commission considers to be positive impacts:

- Direct gaming employment
- Value of new building or renovation works
- Value of building maintenance contracts for the next 12 months
- Value of supply contracts to venue for next 12 months
- Estimated proportion to be provided from suppliers within the municipal district

- Value of complementary expenditures for next 12 months
- Estimated impact on tourism
- Estimated funding or contributions towards improvements to recreational, entertainment or community facilities
- Estimated value of sponsorship of sporting activities, social events and live entertainment
- Estimated funding towards opportunities for particular social groups
- The venue's responsible gaming practices and harm minimisation strategies.

Apart from the venue's code of conduct, these claims are not followed up for accuracy by the regulator unless they form conditions of the licence. Codes of conduct must be approved, but venue harm minimisation strategies are not evaluated. Unlike liquor licensing, there is no requirement for the planning permit to be obtained first, meaning that a poker machine licence may be granted based on a proposal that does not comply with the local planning policy. On the other hand, the information to be provided by local government elsewhere on the same form, relating to the harms from poker machine gambling, must be accompanied by 'evidence to substantiate estimate' (Victorian Commission for Gambling and Liquor Regulation, 2015a). This information relating to negative impacts includes:

- Number of business closures in municipal district (last financial year)
- Number of business closures attributed to electronic gaming machine (EGM) expenditure
- Dollar value of decline in local business (sales) in the previous financial year attributed to EGM expenditure
- Anticipated number of closures and value of decline in business from proposal (first 12 months)
- Estimated impact of gaming on tourism to the municipal district for the previous financial year
- Number of bankrupt persons in the municipal district
- Number of bankruptcies attributed to expenditure on EGMs
- Number of additional bankruptcies that could be attributed to expenditure on EGMs by this proposal (first 12 months)
- Number of persons in the community under financial stress attributed to EGM expenditure
- Number of additional persons anticipated to come under financial stress due to the additional EGM expenditure estimated for this proposal (first twelve months)
- Number of new contacts made to problem gambling service providers (previous 12 months)
- Proportion of these new contacts with specifically EGM related problems

- Number of additional EGM problem gamblers expected to seek help due to this proposal (next 12 months)
- Estimate of further financial requirements of service providers for the additional EGM problem gamblers due to this proposal
- Criminal activity attributed to the EGM expenditure for those problem gamblers who sought help (last 12 months)
- Number of additional crimes attributed to the additional EGM problem gamblers who seek help, created by this proposal
- Amount of marital/relationship breakdown and domestic conflict attributed to problem gamblers' EGM expenditure (of those who sought help last 12 months)
- Number of additional relationship breakdowns/domestic conflicts attributed to new problem EGM gamblers who seek help in the next 12 months, created by this proposal
- Amount of long-term unemployment attributed to problem gamblers, EGM expenditure (of those who sought help last 12 months)
- Number of additional cases of long-term unemployment attributed to problem EGM gamblers who seek help in the next 12 months, created by this proposal.

Each one of these questions has a check box labelled 'unable to accurately determine', which is true for most of the data requested. An impact assessment based only on this form would be biased toward the proposal as it would present a completely inaccurate assessment of harms. These measures of harms are time limited to only 12 months after the new poker machines are installed. They are restricted to affected businesses and those people who attended a gambling specific counselling service in the last 12 months (or next 12 months), which is estimated to be only 15% of all problem gamblers (Productivity Commission, 2010a). The people affected are deemed to be only the number of people who contacted a gamblers' help service and who are impacted by bankruptcy, financial stress, crime, relationship breakdown, domestic conflict, and unemployment. The submission form doesn't take account of the extent of these impacts, other social, health and economic impacts, or the wider community of people, both gamblers and nongamblers who are affected by poker machines.

This framework encompasses most of the social dimensions of assessing impacts from gambling (employment, financial stress, problem gambling, relationship breakdown, conflict, and crime) but the indicator data requested to express these impacts is extremely narrowly focused. The number of gambling related bankruptcies is insufficient

to provide a genuine indication of financial stress. Better indicators might be the extent of engagement with agencies for material aid, non-payment of utility bills, homelessness or increased demand for social housing, debt or reduced savings (South Australian Centre for Economic Studies, 2005a). Unfortunately, obtaining this data would be just as difficult as obtaining the number of bankruptcies due to gambling. The VCGLR framework omits indicators of health and wellbeing and community attitudes, which are important to local government.

It has been recommended that gambling impact assessments use a triangulated or multi-method approach (McMillen & Doran, 2006; Productivity Commission, 2010a; South Australian Centre for Economic Studies, 2005a). Triangulation is a way of checking that the data matches the lived experiences or reality of the research findings. This would typically mean an examination of community profile data, gambling expenditure, community contributions, a review of the literature, and if possible, a community survey and discussions with gamblers and service providers.

This review of the literature shows that there is an emerging body of work that is challenging the traditional view of individual responsibility for gambling problems or susceptibility to gambling problems through individual weaknesses. The public health perspective is highlighting that there is evidence that harm from poker machines is socially determined with higher consumption of poker machines in lower socioeconomic areas. The literature is raising questions about the accessibility of poker machines and their perceived recreational value. The techniques used to normalise gambling and market venues as safe places for children and vulnerable groups are also being questioned. While tensions between individual choice and collective good still exist, research on public attitudes toward gambling consistently show a preference for stronger harm minimisation measures but not banning poker machines altogether.

The assessment of harm is shifting from population measures of ‘problem gambling’ to a burden of harm approach which looks at the impact of gambling on health and wellbeing as being different to the point of addiction or out of control gambling. In this way, gambling harm can be viewed in a similar way to alcohol harm having short term and long term impacts on health as well as broader impacts on the community, that are not classified as alcoholism. Harms from gambling are still mostly being addressed using downstream methods such as counselling, self-exclusion programs or diversion programs, whereas recommendations for upstream methods that would make poker machines safer are being resisted.

This research is an opportunity to measure the actual impacts of poker machine installation on a community rather than the predicted impacts which a social and economic impact assessment is required to do, but focusses on the more difficult aspects of community wellbeing. A triangulated approach of demographic profiling, literature review and community survey has been used.

Theory and methodology

Gambling and the public health approach

The literature on gambling has been heavily focused on the 'problem gambler' as the source of problems and less so on the product itself or the availability or marketing of the product. There has not been a great deal of independent research on gambling from a public health approach, although this has been increasingly called for (Adams, 2011; Adams, Raeburn, & de Silva, 2009; Adams & Rossen, 2012; Korn et al., 2003; Korn & Shaffer, 1999; Livingstone, 2009; Livingstone & Adams, 2011; McDonald, 2009). This is due to the lack of independent funding for gambling research. In reality it is extremely difficult to obtain funding for gambling research that is not from the proceeds of gambling, whether directly or indirectly from industry or State government sources (Adams, 2011; McDonald, 2009). The interests of the gambling industry and the State and Territory governments means they have retained a certain power over much of the gambling research by defining the research priorities and allocation of funding (Adams, 2011; Livingstone, 2009; Livingstone & Adams, 2011; McDonald, 2009). These arrangements give public health advocates very little room to participate in setting research priorities.

Locating the problem with the consumer is a way for the gambling industry and the government to distance themselves from the harms being caused. Livingstone and Woolley described this as a comfortable 'business as usual' arrangement which 'does not deny problem gambling, but it excludes upstream issues of harm causation from the discourse while privileging downstream treatment-based responses' (2007). This helps to explain the amount of gambling research that is focussed on the pathologies, comorbidities and individual determinants of problem gambling, informing the downstream treatment of an individualised aberrant behaviour, addiction, or disorder (Adams et al., 2009) rather than the social and economic determinants of gambling problems. An alternative to addressing problem consumers as the issue, is to locate the

problem with the manufacturers, providers, regulators and promoters of gambling, which can be an uncomfortable position to take. A documentary that aired recently, *Ka-Ching! Pokie Nation*, showed how poker machines are deliberately engineered using knowledge of psychological functioning to deceive their players and entice them to lose more money (Manning, 2015). This use of gambling research however, could not be found in the literature.

The appeal of a public health approach to gambling is that it accepts gambling as a behaviour, and it accepts that the provision of gambling may have some community benefits, but that it is not without risks. The interest in gambling through a public health perspective is in managing risk by preventing harm before it occurs. This has proven successful with some products and behaviours, such as immunisation, life jackets in boats and modifications to cars. With some products and behaviours such as tobacco smoking, public health research was finally able to conclude that no amount of consumption was safe, which has led to putting effort into reducing both supply and demand for tobacco, but not banning it altogether. When the vested interests of the industry and government are excluded, the community's interests can be given more attention. The public health approach fits well with the concept of community empowerment.

This research draws on a public health perspective to question and understand the community impacts of poker machines. Local government advocacy and capacity building on gambling issues has led to the inclusion of gambling as a public health concern for councils, and impact assessments are often done by social or health planners who will consider health among the social, environmental and economic impacts. As a result, addressing the impact of poker machine gambling, especially on vulnerable populations, is finding its way into municipal public health and wellbeing plans in Victoria (Department of Health and Human Services, 2015). Strategies to address gambling issues in municipal public health and wellbeing plans exercise the classic

public health components of gathering and analysing information about the patterns and trends; interventions such as health promotion work and policy development; and identifying needs such as community education or alternative recreation. In order to explain why I have adopted a public health approach to this study, I will first give an overview of public health theory, then consider how it has been used in gambling research to date.

Public health theory

Public health is understood as an outcome of the social, environmental, and economic determinants of health. The status of health within a population typically shows improvement with each step up the socioeconomic ladder. This is commonly known as the socioeconomic gradient of health, and is a global phenomenon seen in low, middle and high income countries (World Health Organization, 2012). Health inequalities are the unequal access to the resources needed for physical and mental health. These include adequate income, educational opportunities, healthy food, social support, and access to services and housing. These factors can also limit opportunities to adopt healthy behaviours. An example of a health behaviour with a strong social gradient is smoking. In 2011/12 the Victorian Population Health Survey found that seven of the eight local government areas with significantly higher than average smoking prevalence were considered to be socioeconomically disadvantaged. Other health behaviours also reflected this gradient. The survey found that sugar consumption significantly increased with decreasing household income, as did inadequate fruit and vegetable consumption and physical inactivity. The prevalence of obesity, diabetes, depression, and anxiety were all significantly higher in people who lived in low socioeconomic areas. Clearly the social and economic environment in which people live is having an influence on their health behaviours and choices. As discussed earlier, harms from gambling are also associated with socioeconomic disadvantage (Livingstone, 2001; Markham et al., 2014;

Markham, Young, et al., 2016; Marshall & Baker, 2001; Productivity Commission, 1999a; Rintoul et al., 2013) which is consistent with our understanding of health inequalities.

Reducing health inequities that result from unfair social and economic arrangements and processes is a central concern of public health (Baum, 2016). Social inequities in health are thought to be caused by a complex interaction between education, attitudes and behaviours, economic resources, and the ability to exercise choice (Australian Institute of Health and Welfare, 2012). In a global sense, health and wellbeing outcomes including life expectancy is higher in nations with lower levels of income inequality, where income inequality is the size of the gap between richest and poorest and not the average income (Baum, 2016). Reducing health inequities is illustrated by the achievements of some 'health without wealth' nations. Baum provides examples of some poorer countries that have achieved significantly improved health status through social policies that prioritised health equity before globalisation and economic growth (2016). This same gradient can be seen within nations and communities that sees some groups marginalised by unequal access to resources, which includes both wealth and social capital. It is for this reason that a healthy taxation system that is equitable is important for public health. Put very simply, a progressive tax system is progressively higher as income increases whereas a regressive tax system is a flat rate that favours the better-off because it is a lower proportion of their income. The taxation revenue from gambling has often been criticised as a regressive tax unfairly extracted from ordinary people playing poker machines in their local pubs and clubs, while the wealthiest who tend not to use poker machines do not contribute in this way, while still benefiting from the tax (Abbott et al., 2015; Livingstone & Adams, 2011; Productivity Commission, 1999a; Sargent & Holmes, 2014; Wilcox, 1983).

Public health theory focuses on the health of populations rather than the health of individuals. Fundamentally, this distinction is made because even very small changes to

a risk factor when conferred across a whole population can have a substantial impact on the incidence of a public health problem in the community (Baum, 2016). This means that a preventive measure to reduce risk to a population can bring enormous benefit to the community while having little impact on individuals. A classic example of this is the wearing of seatbelts while driving. If everyone in a population wears a seatbelt, the burden of road deaths and injuries reduces, even though the only people who directly benefit are those who are involved in a life-threatening road crash. Conversely, the introduction of a new risk factor such as poker machines to a community can impact across the population even though only a small proportion of the population will become problem gamblers. In this instance, an example of how preventive health measures that could regulate this risk with little to no impact on recreational gamblers would be the implementation of recommendations made by the Productivity Commission in its Gambling report of 2010. These included product modifications such as reducing the bet limit to $1 bet limit per button push and limiting the amount of money that can be played at one time; and policy changes including provision of information on cost of play, mandatory pre-commitment, and access to cash withdrawals. There is also ample evidence that restricting accessibility to gambling would also reduce the harm from gambling (Abbott et al., 2015; Young, 2010).

A common feature of public health issues is the tension between ideologies of individual choice and the collective good. A belief in individualism argues that individuals have the right to make their own choices, but may also blame the individual for poor health outcomes. On the other hand, introducing a policy that has a small but not harmful effect on most people can be effective in reducing widespread harm. A common example of this is reducing demand for a harmful product by increasing the price, usually through taxation. Another common strategy is to reduce supply by restricting access to a harmful product. This is frequently done with minimum age restrictions on gambling and purchasing tobacco or alcohol for example, or requiring a licence to drive a car or

operate certain types of machinery. When addressing an issue with a policy that restricts individual choice for the greater good, some will argue against it implying paternalism, or a 'nanny-state' reaction. Examples of this tension are seen with issues such as gun ownership, tobacco, alcohol and high energy/low nutrition foods. Should these products be restricted by law, or should individuals be able to make up their own mind about the risks? Attitude surveys have also revealed this tension with gambling. Although surveys consistently find predominantly negative views of gambling, respondents tend not to support prohibition of gambling (Donaldson et al., 2015; Mond, Davidson, & McAllister, 2011; Orford, Griffiths, Wardle, Sproston, & Erens, 2009; Wardle et al., 2011).

The development of public health has its roots in the early days of sanitation and clean water. Hence the descriptive term 'upstream' to describe preventive and early intervention approaches to a public health issue, and 'downstream' to describe treatment and harm reduction approaches. Since then, public health has been evolving to take in the social, political and environmental aspects of health as well as the lifestyle and behavioural aspects. This 'new public health', is built upon an internationally agreed response to public health concerns outlined in the Ottawa Charter for Health Promotion (Baum, 2016). The Ottawa Charter prioritises five key action areas (World Health Organization, 1986). To demonstrate how these might be applied to poker machine gambling, I have placed some of the recommendations of the Productivity Commission (2010a) that fit with a public health perspective with each of the five action areas as follows:

1. ***Build healthy public policy:*** develop national guidelines, outcome measures and datasets for prevention and early intervention measures; ensure that gaming machine players are informed about the cost of playing through disclosure of the 'expected' hourly expenditure and the percentage cost of play; require that all new EGMs include the capability of being played at a maximum intensity of $1 per button push.

2. ***Create supportive environments:*** There should be capacity for gaming machines to display warnings electronically when the style of play is indicative of significant potential for harm; implement a jurisdictionally-based full pre-commitment system for gaming machines; regularly appraise gambling venues' compliance with harm minimisation measures; cash withdrawals from ATMs/EFTPOS facilities should be limited to $250 a day except for casinos.
3. ***Strengthen community action:*** make the community aware of behaviours indicative of problem gambling, to encourage earlier help-seeking or interventions by family and friends; governments should strengthen consultation processes and incorporate the views of stakeholders, including gambling providers, manufacturers and consumer representatives, into policy development processes.
4. ***Develop personal skills:*** place greater emphasis on campaigns that (i) dispel common myths about gambling and tell people how to gamble safely (ii) highlight potential future consequences (financial losses, relationship breakdowns) associated with problem gambling; promote self-help and brief treatment options.
5. ***Reorient health services:*** work to establish stronger formal linkages between gambling counselling services and other health and community services.

At the local level, attempts are made to apply the Ottawa Charter health promotion strategies to preventing harm from gambling, but I have not found any evaluations of this work. In practice, at the community level, these responses are made with minimal resources and implemented by locally based Primary Care Partnerships and Municipal Public Health and Wellbeing Plans. Municipal public health and wellbeing plans are drawing the connection between public health and gambling, even though this is not among the priorities set out by the Victorian Department of Health or the *Victorian public health and wellbeing plan*. Local governments are developing gambling policies that recognise that exposure to gambling has an impact on health; that reflect community desires to limit the accessibility of gambling; and advocate for reforms to the way

gambling is regulated. However, these policies have limited effectiveness in controlling the availability and accessibility of poker machines in the municipality. Local community development and health promotion work is responding to gambling problems in communities with support groups and group programs that build personal skills to reduce social isolation and divert people away from gambling activities to other healthier pursuits. Some of these programs are more downstream than upstream responses, as they work with people who have already experienced harm from gambling. Other programs try to prevent the rise in gambling problems by suggesting alternative destinations for individuals and social club outings (NEPCP, 2012). These efforts are great examples of health promotion work, but they are no match for the power of the gambling industry and the legislation that has enabled the proliferation of poker machines throughout the community. Applying public health theory to a statewide gambling strategy will need the full participation of State government who can, in turn, involve the industry through regulatory reform.

The Victorian government's public health approach to gambling in 2006 was described in the strategy, *Taking action on problem gambling: a strategy for combating problem gambling in Victoria* which outlined seven key action areas:

1. Building better treatment services
2. Ensuring a more socially responsible gambling industry
3. Promoting healthy communities
4. Protecting vulnerable communities
5. Improving consumer protection
6. Enhancing the regulator
7. Fostering gambling research (Department of Justice, 2006).

This strategy was later criticised by the Victorian Auditor General, who found the public health approach to be appropriate but 'not all initiatives were supported by evidence that they had worked or that they were likely to work' (Victorian Auditor-General, 2010) (p.ix). Claiming a public health approach is not the same as actually practising a public health approach. Adams refers to this type of outcome as 'token attempts at harm reduction'

that come about as a result of the inherent conflict of interest from being dependent on gambling revenue:

> On the one hand, if they are successful in reducing the extent of problem gambling, they could, as a consequence, face significant reductions in their own income. But, on the other hand, if they do nothing regarding the harms, they risk being perceived as complicit in profiteering from the miseries associated with problem gambling (2009) (pp.52-53).

Likewise, the public health notion of shared responsibility for health is resisted by the Victorian government regulator and the gambling industry. Health promotion and harm reduction strategies alone are not enough to address gambling as a public health issue. The Victorian Responsible Gambling Foundation has embraced a public health approach to its work, and makes reference to the Ottawa Charter in making its case for this approach (Victorian Responsible Gambling Foundation, 2015c). The foundation acknowledges there is little gambling harm research to inform evidence-based public health practice in the prevention of gambling related harm, particularly when compared to other public health issues in Australia (2015b).

Public health in the gambling literature

The research literature has been largely based on a medical model centred on the diagnostic examination of the 'problem gambler' (Livingstone & Adams, 2011; Young, 2013). This led to the development of screening tools, population prevalence studies, and profiling of 'problem gamblers' including the examination of risk factors and comorbidities. This means that much of the response to gambling harm has been directed toward the need to treat the 'problem gambler' rather than to consider the impact on the community and the need to prevent harms (Young, 2013). When gambling problems continued to present and increased at the same rate that gambling availability increased, it became evident to those who know their communities that a population approach was needed (Korn & Shaffer, 1999). Raising awareness that gambling looks like a public health problem along the same lines as alcohol, and other risky but legal and profitable consumptions, has not been easy. Viewing gambling from a public health

perspective requires a shift from the dominant perspectives of individual dysfunction or individual rights to one that accepts that at least to a certain extent, these problems have come about as a result of the product and government liberalisation, and therefore preventive measures are needed (Abbott et al., 2015; Korn et al., 2003). Work on shifting the dominant view and placing gambling in the public health frame has mostly come from Canada and New Zealand, where health departments have responsibility for gambling problems. In Australia, or at least in Victoria, gambling is under the jurisdiction of the justice department, and is barely acknowledged by the health department. However, even here there have been some recent contributions toward a public health perspective.

Only a few researchers so far have conceptualised gambling as a public health issue, based on the realisation that the rapid expansion of gambling has created a population level exposure that requires a population level approach (Korn et al., 2003; Korn & Shaffer, 1999; Messerlian et al., 2005). As gambling is a risky consumption, public health responses to address the harms have drawn on learnings from other public health issues such as alcohol and illicit drugs. Korn and Shaffer (1999) described gambling as an emerging public health issue and used the Ottawa Charter health promotion strategies to form a 'gambling and health' policy framework for public health actions and recommendations on gambling. This was the first time that public health theory had been applied to gambling. Korn and Shaffer also challenged the terms 'problem gambling' and 'pathological gambling' preferring the term 'gambling problems'. Gambling problems may be mild, moderate or severe to 'reflect all patterns of gambling behavior that compromise, disrupt or damage personal, family or vocational pursuits and leads to adverse consequences' (p.329). The public health action plan the authors proposed was built on the primacy of prevention initiatives, a mental health promotion approach to gambling, and the importance of fostering personal and social responsibility associated with gambling policies and practices.

Messerlian, Derevensky and Gupta (2005) also proposed a public health framework to address issues of youth gambling. Drawing on the Ottawa Charter, they proposed a prevention model that had practical application at the population level. This was developed into a comprehensive table of recommendations for action under each of the charter's five key action areas.

Williams, West and Simpson (2012) reviewed the gambling literature from a public health perspective, by selecting literature that offered initiatives designed to prevent the development or onset of problem gambling. They evaluated the prevention strategies which were along the lines of community education and policy initiatives for evidence of effectiveness, to produce a list of 12 best practices to prevent problem gambling. Overall, they found that the most common prevention initiatives are the least effective (e.g. awareness/information campaigns, responsible gambling features on poker machines, casino self-exclusion). The potentially more effective initiatives were implemented insufficiently to have an impact (e.g. small reductions in number of venues or poker machines, minor restrictions on access to money). The list of best practices included optimising the design and evaluation of new prevention initiatives; decreasing the general availability of gambling; and eliminating or reducing higher-risk forms of gambling.

Abbott et al. (2015) made a significant contribution to the public health perspective with their Conceptual Framework for Factors Influencing Harmful Gambling. The framework does not commit to any particular theory or perspective but provides a comprehensive view of factors that contribute to harmful gambling. This framework is useful because it organises the harms by gambling specific factors which includes political and economic factors, exposure to gambling, and cultural and social factors. In doing this, it differentiates harms from problem gambling, and moves the focus from individuals to the families and society as a whole.

Langham et al. (2016) also proposed a conceptual framework of harmful gambling, which uses a taxonomy of harms. This framework is different to Abbott et al.'s (2015) framework, in that it classifies harms as they are manifested, whereas Abbot et al.'s classifies factors and environments that influence harmful gambling. In Langham et al.'s framework the authors identified harms in three taxonomies - as experienced by individuals, affected others, and the broader community. The domains of harms are: health, emotional, financial, performance (e.g. work, study), relationship, neglect, cultural, and lifecourse (including generational and intergenerational). This makes it possible to measure the harms from gambling using population measures of harm rather than the traditional measures of problem gambling prevalence or the proxy measure of gambling expenditure.

Browne et al. (2016) applied the Langham et al. (2016) framework to measure the burden of harm from gambling in Victoria using Health-Related Quality of Life (HRQL) weights and the Problem Gambling Severity Index (PGSI) to estimate the population health cost of gambling. This methodology revealed much more information than the prevalence rates of problem gambling, but used the prevalence rates to describe the way harm is manifested in the community. At the population level, harms accruing to non-problem gamblers far exceeded those occurring to problem gamblers. This was particularly demonstrated in demographic groups such as females aged 55 and over, who although with a lower prevalence of problem gambling, actually contributed substantially to the 'burden of harm' in Victoria. Comparisons with other health conditions suggested that gambling problems as a social issue were of a similar level as major depressive disorder and alcohol misuse and dependence. The results suggested that this burden of harm was primarily due to damage to relationships, emotional/psychological distress, health and financial impacts. The study showed that gambling problems affect a broad section of the community and not just those classified as problem gamblers. In many ways, this work could have serious implications for the

policy environment on gambling. The problem gambling prevalence rates that we are so familiar with did not reveal this level of harm. Gambling venues have counted among their benefits to the community that they are a welcoming, socially acceptable and safe place for women to enjoy. This research indicates that they may not be so safe after all.

As my study is concerned with the community impacts of the introduction of poker machines, accessibility is the main factor that is likely to contribute to any harms, while other factors might potentially contribute some benefits. The relationship between accessibility and problem gambling has been established, but my interest is in the harms that might occur that are not necessarily in the problem gambling category. This relationship fits well with public health theory in terms of exposure to gambling. The body of work looking at gambling from a public health perspective is small and relatively recent, but as evidence accumulates, has the potential to influence policy makers and regulators who have a responsibility to prevent and reduce harms from gambling.

Methodology

This research project was designed to test the effects of the introduction of poker machines on community wellbeing. The project is part of a research partnership between Federation University and the City of Whittlesea, and funded by an Australian Research Council Linkage grant number LP0989647. Funding was also provided by contributions from the VLGA and 29 Victorian councils.

The urban growth corridor of the outer northern suburbs of Melbourne presented an opportunity to study the impacts of poker machines as they quickly followed new and planned housing developments and commercial activity. A community which is given the pseudonym of ‘Greenridge’, contained an historic, once rural hotel, located on a major intersection. This hotel is given the pseudonym of ‘Bounty Hotel’. The hotel was purchased by the current owner with the intention of installing poker machines, for which a gaming licence was subsequently obtained.

The Bounty Hotel was previously a small pub providing a small community and passing traffic with a bar and meals. Its transformation to a large, modern venue included a bistro, sports bar, live entertainment, children's play area and gaming room. Although many of the earlier licensed poker machine venues provide very little in the way of amenity for the local community, the Bounty Hotel's expansion has provided the local community with facilities that would not have been built if the gaming licence had been refused.

The local council objected to the installation of poker machines because the municipality was already well supplied with these machines and it was thought that adding more poker machines in this particular community would have a detrimental economic and social impact. In addition, the community had expressed a strong preference not to have poker machines at the venue. The Victorian Commission for Gambling Regulation (as it was known then) disagreed however, and granted the licence, finding that the provision of entertainment facilities to the area outweighed any negative impacts.

The impending poker machines at the Bounty Hotel meant it was possible to test the impact on community wellbeing and attitudes and behaviours toward gambling on poker machines, by surveying the community both before and after their introduction. Although the residents of Greenridge could access poker machines elsewhere in their municipality, this population group did not have access to them within their own community. Very few pre-post studies on the impacts of gambling have been conducted, and these are reviewed below.

Pre - post studies of the effects of introduced gambling on a community

Probably the first, and possibly the only, pre and post study on the effects of gambling on a community was undertaken before and after the opening of a new casino on the Canadian side of Niagara Falls. This study, by Room, Turner and Ialomiteanu (1999) was conducted shortly before the casino opened in 1996 and repeated 12 months later.

While attitudes to gambling remained stable, the actual effects, both positive and negative, were not experienced to the same degree as expected. Even so, participation in gambling increased significantly, as did gambling problems. Reports of gambling problems among friends and relatives rose substantially. The opening of the casino resulted in more gambling activity in the local community, and more gambling problems within the community. This happened even though the intention of opening a casino in this major tourism area was primarily to attract customers who were tourists from outside the community. As mentioned by the authors, the space of one year is not sufficient to determine the extent of gambling problems and whether the increase 'will be sustained, increase or disappear in subsequent years' (p.1465).

In a reverse situation, Lund (2009) investigated the changes to gambling behaviour and problem gambling prevalence when poker machines were removed in Norway in 2007. Using a prospective panel study design, the results showed that in the post-poker machine situation, gambling participation and gambling frequency was reduced among former poker machine players, and the prevalence of gambling problems was significantly lower. There was also a reduction in behaviours such as lying about gambling, and chasing losses. The results strongly suggest that poker machines were significant contributors to gambling harm before they were banned. The two surveys were conducted six months apart. It was not possible to gauge the longer-term effects of a complete ban on poker machines, as new poker machines were introduced shortly after but with a range of new restrictions to make them safer, including a pre-set maximum loss limit.

Fong, Fong and Li (2011) studied the social costs of the liberalisation of gambling in Macao. In this situation, casinos were already operating, but under a government monopoly. Liberalisation of the gambling industry brought about massive foreign investment generating new infrastructure and unprecedented economic growth. This study conducted a comparative analysis of a selected framework of social costs in 2003

(just before liberalisation) and in 2007. The authors identified seven items of social cost relating to gambling and measured these before and after the liberalisation of gambling in Macao. While liberalisation brought rapid economic growth to the city, the authors estimated the social cost rose at an even higher rate, estimated at 163% between 2003 and 2007. Costs were calculated purely on measurable expenses borne by individuals, governments and the gambling industry, and did not estimate costs associated with social issues related to gambling such as reduced productivity, family violence, untreated gambling problems, or stress, for example. It was also not possible to calculate the cost of treatment for problem gambling that wasn't through a government-funded gambling counselling service.

Other studies have inquired about the impact of gambling on a community, particularly on poker machines, after they were installed. A qualitative study of the impact of poker machines on the South Australian town of Peterborough looked at the consequences of an incoming gambling industry on a smaller rural region a year or two after the arrival of poker machines. Marshall (1998b) found that any economic benefits that were anticipated to flow to the community were not apparent, and were instead concentrated with the operators of the machines and the State government. Negative aspects of the introduction of poker machines in this community were found, which were aggravating problems already experienced in this town due to declining population and economic conditions. Reduced fundraising was the first and most obvious change, with reduced donations and reduced participation in social fundraising activities such as sporting contests, annual balls and car rallies. Small businesses experienced increased pressures due to declining business turnover. For example, subsidised meals at poker machine venues were reported to contribute to declining business at local restaurants. Any new employment at the gambling venues appeared to be offset by reduced employment from other businesses. In addition, most people interviewed knew of someone with a gambling problem.

Although there have been many studies of social and economic impacts of poker machines on the community, both here in Australia and in other countries, there has been no pre-post research to study the changes that occur in a community's wellbeing, as a result of the introduction of poker machines.

Research setting

The City of Whittlesea is located on Melbourne's metropolitan fringe, with its southernmost border approximately 20 kilometres north of the city centre. Covering 490 square kilometres, it is a large municipality containing established urban, growth and rural areas. The study location within this municipality comprises a designated growth area of 59 square kilometres, with the population estimated to grow to 79,000 by 2026.

In 2001, the population of Greenridge was 6,571. In the ten years to 2011, the population grew to 39,119. By 2015, the estimated population was 59,314 (Australian Bureau of Statistics, 2014). In four years, the population grew by 51.6% or 20,195 people. The area is especially appealing to young families buying their first home because new homes are relatively affordable in this area.

In the City of Whittlesea, poker machines have been part of the entertainment offering for more than 20 years. In 1992, there were 105 machines located in the municipality, and losses for the 1992/3 financial year reached $1.7 million. By 2016, the number of machines had grown to 691 and losses for the 2015/16 financial year were $103.4 million (Victorian Commission for Gambling and Liquor Regulation). Annual poker machine expenditure in the Whittlesea municipality is among the highest per capita in Victoria, even though the density of machines is lower than average. In 2015, the 'per adult' expenditure was well above average at $698, compared to the metropolitan average of $576. Poker machine density in Whittlesea was lower than average at 4.5 machines per 1,000 adults, compared to the metropolitan average of 5.3.

As a newly developing area on the urban fringe, the kind of infrastructure that fosters community participation is developing at a slower rate than housing. A study of the effect of population growth on the Greenridge area discussed the risk of social fragmentation accompanying the creation of new communities. It found there was a need for more community and support services and investment in entertainment, shopping and leisure

facilities to improve the experience of living in the area for all age groups (Robson, 2011). The community has actively lobbied the state government for road widening, extension of the rail line, and a police station.

The historic hotel on the main intersection of Greenridge, given the pseudonym of the Bounty Hotel, was purchased during the early stage of housing development, and despite council opposition was granted a licence for 40 poker machines. The initial application for 60 poker machines at the Bounty Hotel was refused in 2008. The reasons for refusal included its location in a retail area and in a community financially vulnerable due to high mortgages, and the already high gaming expenditure in the municipality ("Benmara Pty Ltd for approval of premises as suitable for 60 gaming machines," 18 March 2008). A second application for 40 poker machines was granted in 2009 on the condition that 20 of the machines were purchased from an area of the municipality which has a higher concentration of poker machines ("Benmara Pty Ltd for approval of premises as suitable for gaming with 40 gaming machines," 15 July 2009). A third application to remove the condition imposed was successful on the grounds that the population had increased and there was no other entertainment venue in the area ("Benmara Pty Ltd for approval of premises as suitable for gaming with 40 gaming machines," 30 Sep 2011). The Bounty Hotel closed in June 2012 for renovations and re-opened in December 2013, extensively enlarged with a new gaming room holding 40 poker machines. It is the only hotel in the area, and the residential areas surrounding the hotel became the site for measuring the impact of poker machines on a community that did not previously have immediate access to them. In 2014, an application for an additional 20 poker machines was approved on completion of further works to the venue, bringing the number to 60 as in the original application ("Benmara Pty Ltd for approval of premises as suitable for gaming with 40 gaming machines," 11 Nov 2014).

Profile of Greenridge

The area comprises a 2011 Australian Bureau of Statistics geographic boundary, however to preserve anonymity, I have called the geographic area Greenridge. Anonymity of this community has been preserved as an ethical condition of the research.

In 2011, the median age was 30 years, compared to 36 years for Greater Melbourne. In Greenridge, 69% of the population is aged under 40 years, compared to 55% of the Greater Melbourne population. Only five percent of the population is aged 65 years and over compared to 13% of the Greater Melbourne population.

Table 2. Population characteristics of Greenridge from the 2011 Census of Population and Housing

Population characteristics	Greenridge	City of Whittlesea	Metropolitan Melbourne	Victoria
Population	38,321	154,880	3,999,982	5,354,042
Gender split (male/female) %	49.2/50.8	49.6/50.4	49.2/50.8	49.2/50.8
Median age	30	34	36	37
Aboriginal and Torres Strait Islander people %	0.6	0.7	.45	0.7
Average children per family	1.9	1.9	1.8	1.9
SEIFA (Index of relative socioeconomic disadvantage)[1]	1063	1018	1020	1010
Median weekly household income $	1,643	1,275	1,333	1,216
Median monthly mortgage payment $	2,113	1,863	1,810	1,700
Median weekly rent $	350	300	300	277
Unemployment rate %	3.9	5.6	5.5	5.4
Proportion of one-parent families %	13.1	15.9	15.3	15.5
Lone person households %	12.1	15.2	23.3	24.5
Households where rent is 30% or greater than household income %	5.8	7.5	9.7	9.1
Households where mortgage payments are 30% or greater than household income %	24.9	15.9	11.0	10.1

Source: Australian Bureau of Statistics Census of Population of Housing, 2011, QuickStats, (Australian Bureau of Statistics, 2012b).

[1] Socio-economic Index for Areas (SEIFA) is a value created by combining information about the economic and social resources of a community collected in the Census of Population and Housing. Measures are standardised across Australia with a mean of 1000. Therefore, areas with scores above 1000 are relatively less disadvantaged than the Australian average, and those with scores below 1000 are relatively more disadvantaged (Australian Bureau of Statistics, 2008).

Age

The community has a younger age profile than for Greater Melbourne. In Greenridge the median age is 30 years, compared to 34 years for the municipality of Whittlesea, 36 years for the Greater Melbourne area, and 37 years for the state of Victoria. In 2011, there were 839 babies born to families in the area. The fertility rate was 2.05 children per woman, compared to the Victorian state fertility rate 1.75 in 2011(Australian Bureau of Statistics, 2012a).

Children aged 0 - 11 years made up 22.8% of the area's population compared to 14.9% in Victoria. People aged 70 years and over made up just 3.2% of the population compared to 10.1% in Victoria.

Table 3. Population age structure by service-user group, 2011

Age group	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Babies and pre-schoolers (0 to 4 years)	4,071	10.6	7.4	6.5	6.4
Primary school (5 to 11 years)	4,689	12.2	9.5	8.4	8.5
Secondary school (12 to 17 years)	3,068	8.0	7.9	7.3	7.5
Tertiary education & independence (18 to 24)	3,085	8.1	9.8	10.1	9.6
Young workforce (25 to 34 years)	7,535	19.7	16.3	15.4	14.2
Parents and homebuilders (35 to 49 years)	9,575	25.0	22	22.0	21.4
Older workers & pre-retirees (50 to 59 years)	3,210	8.4	11.6	12.1	12.5
Empty nesters and retirees (60 to 69 years)	1,892	4.9	8.3	9.0	9.7
Seniors (70 to 84 years)	941	2.5	6.2	7.4	8.1
Frail aged (85 and over years)	255	0.7	1.0	1.8	2.0
Total	**38,321**	**100.0**	**100.0**	**100.0**	**100.0**

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Marital status

Of people aged 15 years and over, 56.6% were married and 9.4% were either divorced or separated. The marital relationship status by age group is shown in Table 4.

Table 4. Registered marital status, 2011

People aged 15 years and over	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Married	15,815	56.6	54.2	48.8	49.1
Separated	863	3.1	3.0	2.7	2.9
Divorced	1,750	6.3	6.4	7.4	7.8
Widowed	797	2.9	4.5	5.1	5.6
Never married	8,733	31.2	31.9	35.9	34.7

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Homes

In Greenridge, 92% of homes were occupied on census night in 2011. Of occupied private homes, 90.6% were separate houses. The average number of bedrooms is 3.5 per dwelling.

Table 5. Dwelling structure, 2011

Dwelling structure	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Separate house	10,932	90.6	89.7	72.6	76.9
Semi-detached, row or terrace house, townhouse	994	8.2	6.2	11.6	9.6
Flat, unit or apartment	141	1.2	4.0	15.3	12.9
Other dwelling	3	0.0	0.1	0.4	0.6

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Households

In 2011, there were 12,071 households in Greenridge. As can be expected with a younger population, the majority of households are families, with fewer than average one-person or group households.

Table 6. Household types, 2011

Household Type	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Families	10,380	86.0	82.5	72.0	71.2
Single (or lone) person households	1,456	12.1	15.2	23.3	24.5
Group households	235	1.9	2.3	4.7	4.2

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Of all family types, families with children (58.3%) made up a large proportion of the population, with a lower than average number of one-parent families (13.1%).

Table 7. Family composition, 2011

Family composition	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Couple family without children	2,912	27.5	29.8	34.8	36.7
Couple family with children	6,174	58.3	52.7	47.9	46.0
One parent family	1,393	13.1	15.9	15.3	15.5
Other family	118	1.1	1.5	2.0	1.8

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Cultural and language diversity

The Census of Population and Housing asks for the country of birth of parents. This ancestry information gives an idea of second generation cultural identification. In Greenridge the majority of people identify with English-speaking ancestry, with Italian being be the top non-English speaking ancestry. The most common ancestries are shown in Table 8.

Table 8. Top 5 ancestries in Greenridge compared to municipality, city and state, 2011

Top 5 ancestries Greenridge	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	%	%	%	%
Australian	11,517	23.5	17.1	20.7	23.3
English	10,306	21.0	15.2	21.1	23.5
Italian	5,498	11.2	12.4	5.5	4.8
Irish	2,999	6.1	4.4	6.9	7.6
Scottish	2,470	5.0	3.5	5.7	6.4

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

A smaller proportion of people born overseas live in Greenridge compared to the municipality, city and state, as can be seen in Table 9.

Table 9. Top 5 countries of birth in Greenridge compared to municipality, city and state, 2011

Top 5 countries of birth (by residents of Greenridge)	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	%	%	%	%
Australia	28,944	75.5	61.7	63.3	68.6
India	944	2.5	3.4	2.7	2.1
England	888	2.3	1.9	3.4	3.2
Italy	685	1.8	4	1.7	1.4
Former Yugoslav Republic of Macedonia (FYROM)	631	1.6	3.7	0.4	0.3

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

The proportion of households where languages other than English spoken at home is similar to state levels, but considerably less than the whole municipality. In Greenridge, the most commonly spoken languages other than English were Italian, Macedonian, Greek, Arabic and Punjabi, as shown in Table 10.

Table 10. Top 5 languages spoken at home, 2011

Languages spoken at home (by residents of Greenridge)	Greenridge *N*	Greenridge %	City of Whittlesea %	Greater Melbourne %	Victoria %
English only	28,057	73.2	53.4	66.3	72.4
2 or more languages spoken	3,516	29.1	48.7	32.4	25.7
Italian	1,648	4.3	6.7	2.8	2.3
Macedonian	1,466	3.8	6.8	0.7	0.6
Greek	772	2.0	4.7	2.8	2.2
Arabic	604	1.6	4.6	1.6	1.3
Punjabi	360	0.9	1.9	0.7	0.6

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Economic resources

Economic and material resources are the things that make up the economic capital of a community. Things such as adequate income, jobs, affordable housing and access to transport together add up to greater opportunities and are associated with better health and education outcomes. People living on incomes that are inadequate to cover their basic needs for housing and food find these added stresses lead to difficulties in fulfilling educational and employment potential (Australian Institute of Health and Welfare, 2007). In the growth area of Greenridge, household incomes are relatively high, however the cost of housing is also relatively high.

Income

Income is critical to wellbeing because many of the basic needs have to be purchased: food, water, and shelter, as well as healthcare and some forms of recreation. Household income is an important indicator of economic resources. Incomes are shown in Table 11.

Table 11. Median Weekly income, 2011

People aged 15+	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	$	$	$	$
Personal	724	519	591	561
Family	1,736	1,375	1,576	1,460
Household	1,643	1,275	1,333	1,216

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Around 10% of households in the area are living on relatively high incomes of more than $3,000 per week, which is similar to the state average. A smaller than average proportion of households is living on very low incomes of less than $600 per week.

Table 12. Household income, 2011

Household income	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	%	%	%	%
Less than $600 gross weekly income	10.6	20.5	21.3	23.8
More than $3,000 gross weekly income	10.0	7.6	12.3	10.4

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Affordable housing

Compared to the municipality and state, a larger proportion of residents in Greenridge are purchasing their homes and a smaller proportion are renting. Housing affordability refers to the relationship between household income and expenditure on housing. In Australia, the average amount spent on housing is 15% of household income (Yates & Gabriel, 2006). Threshold income is a housing affordability indicator based on median house price, prevailing interest rates, 90% loan limit, 25-year term, with repayments not exceeding 30% of income (Swinburne Institute for Social Research, 2008).

Table 13. Summary of housing statistics, 2011

	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
Median house price, 2011*	$425,000	$410,000	$425,000	$420,000
Threshold income to purchase median price house	$116,790	$112,677	$135,349	$115,425
Proportion of households with homes fully owned	15.5%	32.1%	31.5%	33.0%
Proportion of households purchasing with a mortgage	65.8%	42.9%	35.3%	34.5%
Households where mortgage payments are 30% or greater, than household income	24.9%	15.9%	11.0%	10.1%
Households where mortgage payments are less than 30% of household income	75.1%	84.1%	89.0%	89.9%
Proportion of households renting	16.7%	19.3%	26.5%	25.9%
• Renting - Social housing	0.7%	1.5%	2.9%	3.2%
• Renting - Private	15.8%	17.4%	23.1%	22.1%
• Renting - Not stated	0.2%	0.4%	0.5%	0.6%
Households where rent payments are 30% or greater, than household income	5.8%	7.5%	9.7%	9.1%
Households where rent payments are less than 30% of household income	94.2%	92.5%	90.3%	90.9%

Sources: Housing in Victoria website and Australian Bureau of Statistics Census 2011. *Median house price and threshold income data for Greenridge is calculated by averaging data for the three suburbs comprising Greenridge. (Australian Bureau of Statistics, 2012a; Swinburne Institute for Social Research, 2008).

Car ownership

Most households in the growth suburbs had two or more cars in 2011 (75.5%). This is much higher than the metropolitan average (55.8%) and state average (56.8%) of households with more than one car.

Table 14. Motor vehicle ownership, 2011

Registered motor vehicles	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
None	211	1.7	5.2	9.1	8.4
1 motor vehicle	2,754	22.8	29.2	35.0	34.7
2 motor vehicles	6,439	53.3	41.4	36.9	37.0
3 or more motor vehicles	2,435	20.3	21.3	16.0	16.8
Number of motor vehicles not stated	231	1.9	3.0	2.9	3.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Transport

Access to transport is an important enabler of participation in employment, education, recreation and health services. Transport Limitations were measured in the 2011 VicHealth Indicators Survey. Respondents were asked if their day-to-day travel had been limited or restricted in the previous 12 months. Almost a third (30.9%) of adults living in the municipality of Whittlesea had experienced transport limitations in the previous year, compared to 24.3% in the Northern & Western Metro Region and the Victorian State average of 23.7% (McCaughey VicHealth Community Wellbeing Unit, 2011).

In the municipality of Whittlesea, the percentage of the population that lives within 400 metres of a bus stop and/or 800 metres of a train station was 72.1% in 2010 (Modelling GIS and Planning Products, 2010). In comparison, 82.9% of the Greater Melbourne population, and 72.3% of the Victorian population lived close to public transport. It is unsurprising therefore that a higher majority of people travel to work using their cars, and a smaller proportion use public transport.

Table 15. Most common modes of travel to work, 2011

Employed people aged 15+	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Car, as driver	14,602	73.3	69.7	60.5	61.4
Car, as passenger	783	3.9	4.9	4.3	4.6
Train	422	2.1	3.8	6.0	4.8
Train, car as driver	369	1.9	1.5	1.3	1.0
Truck	198	1.0	1.1	0.5	0.8
People who travelled to work by public transport	1,327	6.7	8.9	13.9	11.1
People who travelled to work by car as driver or passenger	15,436	77.5	74.8	65.0	66.2

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Oil and mortgage vulnerability

An index based on Census variables that is applicable to the growth areas in particular is the Vulnerability Analysis of Mortgage, Petrol and Inflation Risks and Expenditure (VAMPIRE) Index. This index, made up of car dependence, income level and mortgages produces a vulnerability score that can be mapped in a similar way to SEIFA. Typically, outer suburban growth areas with inadequate access to public transport, and mortgages that are high relative to income, are particularly vulnerable to oil and interest rate increases (Dodson & Sipe, 2008). The map below depicts the populated areas of Greenridge with suburb names redacted. These areas fall within the highest vulnerability on the VAMPIRE Index (Griffith University - Urban Research Program, 2015).

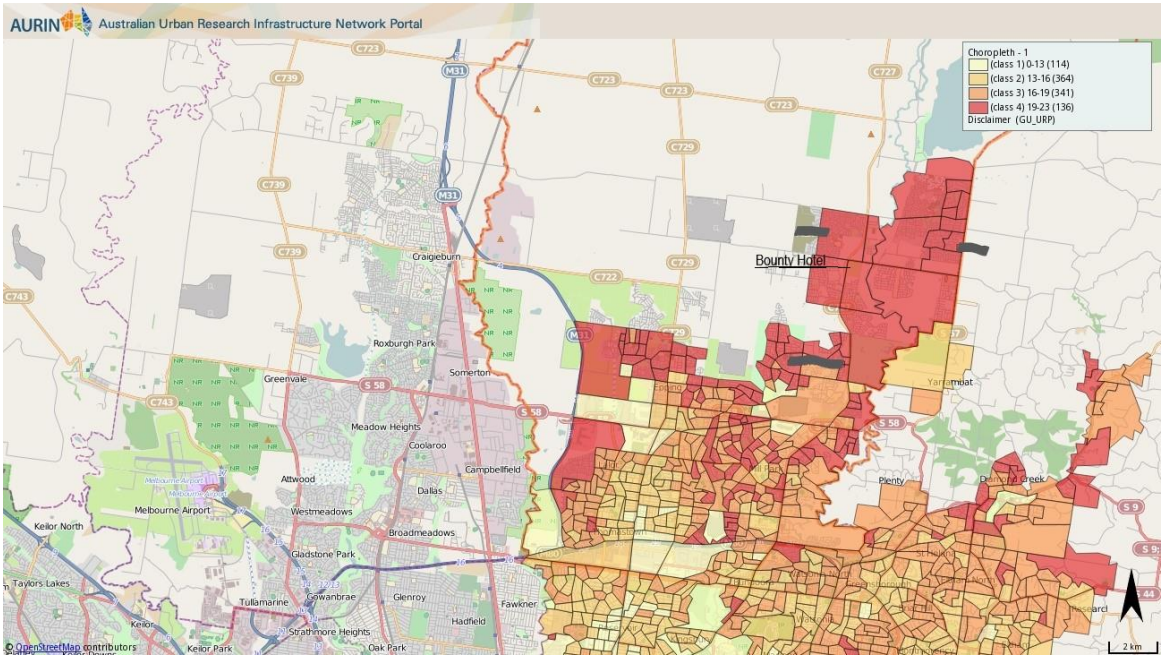

Figure 1. VAMPIRE for Australian Capital Cities, Oil and Mortgage Vulnerability, Northern suburbs of Melbourne, 2011

Source: Extracted from the Australian Urban Research Infrastructure Network Portal (AURIN).

Skills and Knowledge

Participation and achievement at school predict better wellbeing and employment outcomes, which affect incomes.

Highest level of secondary schooling completed

By participating in school beyond Year 10, young people build stronger foundations for their future in knowledge, educational and social skills. Young people with low educational attainment are more likely to face greater difficulty in transitioning to work, experience higher unemployment and long-term socioeconomic disadvantage (Allen Consulting Group Pty Ltd, 2008).

The growth area suburbs making up the Greenridge Area are characterised by a smaller than average proportion of residents who did not completed Year 12 or equivalent (38.3% compared to the state average of 46.3%).

Table 16. Highest level of secondary schooling completed, 2011

Persons aged 15 and above who are no longer attending school	Greenridge *N*	Greenridge %	City of Whittlesea %	Greater Melbourne %	Victoria %
Year 8 or below	1,000	3.8	9.5	6.3	8.4
Year 9 or equivalent	1,317	4.9	6.3	4.7	7.2
Year 10 or equiv't	4,010	15.1	14.3	12.2	15.8
Year 11 or equiv't	3,712	13.9	12.4	10.8	13.8
Year 12 or equiv't	14,878	55.9	47.5	56.7	44.0
Did not go to school	167	0.6	2.2	1.3	1.1
Not stated	1,535	5.8	7.8	8.0	9.6
Total persons aged 15+	26,619	100.0	100.0	100.0	100.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Educational qualifications

The level of post-secondary education attainment among the population is an important resource to both individuals and the community. In Greenridge, the proportion of people aged 25 years and over with vocational qualifications is higher than the metropolitan and state average but the level of higher education is lower. The proportion of people with no qualifications is similar to the state and metropolitan average.

Table 17. Highest level of non-school qualification in people aged 25 years and over, 2011

Persons aged 25 years and above	Greenridge *N*	Greenridge %	City of Whittlesea %	Greater Melbourne %	Victoria %
Bachelor or higher degree	4,258	18.2	15.0	26.5	23.3
Advanced diploma or diploma	2,396	10.2	8.2	9.5	9.2
Vocational	5,608	24.0	18.2	15.9	17.3
No qualification	9,456	40.4	49.4	38.7	40.6
Not stated	1,688	7.2	9.2	9.4	9.6
Total persons aged 25+	23,406	100.0	100.0	100.0	100.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Workforce

The local workforce is fundamental to the economic growth of the area, whether as employers, workers or consumers. The labour force participation rate refers to the proportion of the population over 15 years of age that was employed or actively looking for work. In Greenridge, 74% of residents aged 15 and over were in the workforce. The strength of the workforce is higher than the surrounding area, and this can partly be explained by the younger median age and fewer retirees.

Table 18. Labour Force, 2011

Persons aged 15 and above	**Greenridge**	**Greenridge**	**City of Whittlesea**	**Greater Melbourne**	**Victoria**
	N	**%**	**%**	**%**	**%**
Total labour force	20,731	74.2	61.8	61.2	61.4
Not in the labour force	6,147	21.9	33.4	32.4	33.3
Labour force status not stated	1,080	3.9	4.9	6.5	5.2
Total (aged 15+)	27,958	100.0	100.0	100.0	100.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Unemployment in the area is relatively low and the proportion of people employed full time is relatively high. Employment statistics are shown in Table 19.

Table 19. Employment status of the labour force, 2011

Labour force aged 15 and above	**Greenridge**	**Greenridge**	**City of Whittlesea**	**Greater Melbourne**	**Victoria**
	N	**%**	**%**	**%**	**%**
Employed	19,927	96.1	94.4	94.7	94.6
• *Employed full-time*	*13,502*	*65.1*	*61.3*	*61.1*	*59.2*
• *Employed part-time*	*5,962*	*29.9*	*30.3*	*31.0*	*33.3*
• *Hours worked not stated*	*463*	*2.3*	*2.7*	*2.7*	*2.1*
Unemployed	804	3.9	5.6	5.3	5.4
• *Looking for full-time work*	*433*	*2.1*	3.4	3.2	3.1
• *Looking for part-time work*	*371*	*1.8*	2.3	2.1	2.3
Total Labour Force	20,731	100.0	100.0	100.0	100.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Youth employment

Young adulthood is the time when most people obtain their first job, usually part-time which assists with gaining future employment. In 2011, 38% of all people aged 15-19 years in the Whittlesea growth area were in the labour force. Of these, 17% were working full time. Among all people aged 20-24 years, 78% were in the labour force, and of these, 47% were working full time.

Table 20. Youth labour force (Age 15 -24 years), 2011

Youth labour force	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	**%**	**%**	**%**	**%**
Employed	2,637	88.9	87.5	87.7	87.9
• *Employed full-time*	*1,391*	*52.7*	*47.8*	*37.1*	*38.1*
• *Employed part-time*	*1,141*	*43.3*	*48.0*	*47.5*	*46.9*
• *Hours worked not stated*	*105*	*4.0*	*4.2*	*3.1*	*3.0*
Unemployed	330	11.1	12.5	12.3	12.1
• *Looking for full-time work*	*146*	*4.9*	*6.2*	*4.9*	*5.2*
• *Looking for part-time work*	*184*	*6.2*	*6.3*	*7.4*	*6.9*
Total Labour Force	2,967	100.0	100.0	100.0	100.00

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Occupations

A skilled workforce in a community is an important factor in the development of a strong local economy. Successful economic growth depends on work that is more knowledge-intensive than ever as process and manufacturing jobs have become more automated (ABS, 2002).

A highly skilled occupation has been defined as one with a skill level of 1, 2 or 3 as assigned in the Australian and New Zealand Standard Classification of Occupations (ANZSCO) (ABS, 2009). Technical and trades workers, managers, and professionals are classified as skill level 1, 2 or 3. Sales workers, clerical and administrative workers, and community and personal service workers are classified as skill levels ranging from 2 to 5

depending on the qualification achieved. Labourers are classified as having ANZSCO skill level 4 or 5, machinery operators and drivers as skill level 4.

The occupations of local residents give some insight into the socioeconomic status, aspirations and skill base of a community. The proportion of highly skilled workers in Greenridge is 45.5%, which is higher than the Whittlesea municipality (40.4%), but lower than Greater Melbourne (50%) and Victoria (49.4%). The occupation classifications in Greenridge, compared to the metropolitan area and state are shown in Table 21.

Table 21. Occupations, 2011

Employed people aged 15+	**Greenridge**	**Greenridge**	**City of Whittlesea**	**Greater Melbourne**	**Victoria**
	N	**%**	**%**	**%**	**%**
Managers	2,306	11.6	9.4	12.5	13.2
Professionals	3,370	16.9	14.8	24.1	22.3
Technicians and Trades Workers	3,388	17.0	16.2	13.4	13.9
Community and Personal Service Workers	1,823	9.1	9.4	8.9	9.3
Clerical and Administrative Workers	3,481	17.5	16.4	15.3	14.4
Sales Workers	2,205	11.1	11.1	9.7	9.7
Machinery Operators and Drivers	1,383	6.9	9.2	5.9	6.1
Labourers	1,593	8.0	11.2	8.0	9.0
Inadequately described	373	1.9	2.4	2.3	2.2
Total	19,922	100.0	100.0	100.0	100.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Community strength

The factors that contribute to community strength are economic, natural and human resources (people with skills); strong networks that promote social inclusion and civic participation; and a sense of safety and wellbeing. Using Census data, and indication of community strength can be found by considering the socio-economic indices, internet access and level of volunteering.

The Socio-economic Index for Areas (SEIFA) is a value created by combining a number of variables on the economic and social resources of a community collected in the Census of Population and Housing (ABS, 2008). The SEIFA includes four indexes, summarised below.

Table 22. Summary of SEIFA Index variables

Acronym	Index	Summary
IRSD	The Index of Relative Socio-economic Disadvantage	Derived from Census variables related to disadvantage, such as low income, low educational attainment, unemployment, and dwellings without motor vehicles. Uses only measures of relative disadvantage and is used in the accompanying SEIFA map.
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage	Includes both relative advantage and disadvantage measures on a continuum of advantage (high values) to disadvantage (low values) derived from Census variables related to both advantage and disadvantage, like households with low income and people with a tertiary education.
IER	Index of Economic Resources	Focuses on the general level of access to economic resources of people and households within an area, using the Census variables relating income, housing expenditure and assets of households.
IEO	Index of Education and Occupation	Focuses on the general level of education and occupation-related skills of people within an area, like the proportion of people with a higher qualification or those employed in a skilled occupation.

All four measures are standardised across Australia with a mean of 1000. Therefore, areas with scores above 1000 are relatively less disadvantaged than the Australian average, and those with scores below 1000 are relatively more disadvantaged.

Table 23. SEIFA values, 2011

Index	Greenridge	Greenridge range	City of Whittlesea	City of Whittlesea range
Relative socio-economic disadvantage	1063	953-1135	989	795-1135
Relative socio-economic advantage and disadvantage	1056	936-1142	983	816-1142
Economic Resources	1090	963-1193	1020	860-1193
Education and Occupation	1000	874-1063	955	827-1091

Source: Australian Bureau of Statistics SEIFA data and City of Whittlesea community profile, (Australian Bureau of Statistics, 2013; ID the population experts, 2012)

Access to the internet

Broadband connection to the internet is increasingly becoming essential as a means to access services and maintain social connections. In Greenridge, a relatively small proportion of households have no internet connection (11.4%). This is a lower rate than average for the municipality, Greater Melbourne area, and the state.

Table 24. Internet access at home, 2011

Connection type	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	%	%	%	%
Total internet connection	10,361	85.8	74.1	76.4	74.3
Broadband connection	9,417	78.0	67.9	70.0	67.6
Dial-up or other form of connection	944	7.9	6.2	6.4	6.7
No internet	1,374	11.4	19.8	16.8	19.1
Not stated	335	2.8	6.1	6.8	6.6
Total Households	12,070	100.0	100.0	100.0	100.0

Sources: City of Whittlesea Community Profile and Australian Bureau of Statistics Census of Population of Housing, 2011 (Australian Bureau of Statistics, 2012a; ID the population experts, 2012)

Volunteering

The level of volunteering in a community is a good indicator of community networks, inclusiveness and participation. Volunteer organisations such as Landcare, Country Fire Authority or 'friends of' groups also help look after the natural environment. Benefits of

volunteering include improved job opportunities, natural surveillance, improved parenting, increased networks and respect for diversity through exposure to different types of people. Voluntary work also contributes to the local economy. Volunteers undertake work that would otherwise have to be paid for, or more likely not done at all. Examples are parents helping in classrooms, medical appointment drivers, and scout leaders. In Greenridge, people are less likely to volunteer than on average for Greater Melbourne or Victoria.

Table 25. Volunteering for an organisation or group, 2011

People aged 15 years and over	Greenridge	Greenridge	City of Whittlesea	Greater Melbourne	Victoria
	N	%	%	%	%
Did voluntary work through an organisation or group	3,217	11.5	9.7	15.8	17.7

Source: Australian Bureau of Statistics SEIFA data and City of Whittlesea community profile, (Australian Bureau of Statistics, 2013; ID the population experts, 2012)

Overall, the Greenridge community can be described as young, living mainly in family households, and with a higher than average birth rate. There is relatively low cultural diversity and lower than average educational attainment. A large proportion of the population is in the workforce, and this means that household incomes are higher than average. The area has a high proportion of low density housing. Although the area appears quite affluent, mortgages are high and car dependency is high, adding to household expenses. This indicates a high vulnerability to oil prices and interest rate rises. The rate of volunteering is lower than average. This could be due to higher workforce participation, carer responsibilities, or a low level of community connectedness. While not economically disadvantaged, these characteristics indicate a community with some vulnerabilities due to high housing costs and reduced community infrastructure and social capital. If gambling problems were to occur in this area, it can be inferred that it would put a lot of stress on relationships, families and housing as well a wider community wellbeing.

Method

This study used a pre-post research design to look for changes in aspects of community wellbeing that may be explained by the introduction of poker machines. The advantage of this design in this situation is that there was an opportunity to ask questions of members of the community before the poker machines were installed, with the knowledge that the machines were coming in the near future. In the 'pre' condition, it was possible to ask about attitudes and behaviours toward gambling, as well as aspects of wellbeing generally. In the 'post' condition, the attitudes, behaviours and measures of wellbeing are compared. It is also to possible to test the predictions made by participants in the 'pre' survey.

Ethics approval was obtained from the university's Human Research Ethics Committee (HREC) – approval number A10-077. The sampling frame was a list of addresses from the council property database that were within the three suburbs making up the area of Greenridge. The City of Whittlesea generated a list of 2,000 addresses at random which were provided without owners' names. The letters were addressed to 'The Resident' and did not discriminate between owners or renters of the properties they were delivered to. The initial recruitment method was to mail the survey to the 2,000 households. When this method yielded a small sample size, further approval was sought from the HREC in early December 2013 to recruit more participants. This was done by making the survey available online and using online community networks and distribution of flyers to invite participation from all households in the area.

As this survey was looking at the impact of poker machines, there was potential for some of the questions to cause upset to participants who had experienced harm from poker machine gambling. A plain language information statement accompanied the questionnaire which explained that it was anonymous, completely voluntary, and that the data collected would be secured. Information was provided on how to seek help if

participation in the study was upsetting to respondents. This statement is provided as Appendix A.

The research area boundary was determined by an Australian Bureau of Statistics statistical geographic area at the level known as Statistical Area Level 2 (SA2). The Australian Statistical Geography Standard (ASGS) defines statistical boundaries at four different levels within each State and Territory. The SA2 boundaries are roughly equivalent to a suburb with a population range of 3,000 to 25,000 (ABS, 2014). This particular SA2 however, has grown considerably in population, well beyond the size of the average SA2. In 2001, the population was roughly 3,500 and by 2015 it had grown to roughly 60,000. Using the SA2 level allowed me to profile an area surrounding the Bounty Hotel with Census of Population and Housing data, which excluded all other poker machine venues in the municipality. To protect the anonymity of the community, the SA2 is given the pseudonym of 'Greenridge'.

Measures

A community questionnaire was developed to assess community wellbeing and also to measure attitudes and behaviours toward the presence of poker machines in communities. The majority of questions were drawn from widely-used population surveys.

Measures of gambling behaviour and attitudes

Questions on gambling behaviour were adapted from the Victorian Longitudinal Study of 2003 (McMillen et al., 2004). These questions asked about visitation and poker machine playing at the nine venues within the municipality and other venues within Victoria. Respondents were asked to predict their intention to visit the Bounty Hotel and play the poker machines in the first survey, and asked about their actual visits and poker machine playing in the second survey.

Attitudes toward gambling were measured with nine questions from the 14-item Attitudes Towards Gambling Scale (ATGS) (Orford et al., 2009) and five items from the Victorian Longitudinal Study of 2003 (McMillen et al., 2004) to make up a new set of 14 questions that were appropriate to this research.

Gambling problems were tested with the 9-item Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001).

To find out about the perceived effects of poker machines on the community, questions were adapted from a local government survey used in the landmark Macedon Ranges Shire Council v Romsey Hotel case. This application was finally settled in the Court of Appeal by the Supreme Court of Victoria which found 'if approval is likely to cause unhappiness or discontent in that community…that consequence is a social impact of approval which will be detrimental to the wellbeing of the community" ("Macedon Ranges Shire Council v Romsey Hotel Pty Ltd & Anor (2008) VSCA 45 ", 2008). The original questions were developed through a collaboration between Macedon Ranges Shire Council and the University of Ballarat. The adapted questions for this research asked if happiness, contentment, and wellbeing will be affected by the introduction of poker machines in the pre survey, and if they were affected in the post survey.

An open-text question, 'Is there anything else you would like to say about the effect of pokies on community wellbeing?' was added to provide more insight from respondents.

The post, or second survey included some questions asking about personal knowledge of any people having problems with their gambling.

Measures of community wellbeing

Community wellbeing was measured with a variety of instruments adapted for use in the questionnaire. Several of the questions were not repeated in the post survey in order to shorten the survey.

Sense of community was measured with eight items from a survey by the Australian Institute of Family Studies (AIFS) making up a ‘sense of community’ index which can be further explored with six of the items grouped into a ‘sense of belonging’ index and the remaining two items make up a ‘sense of safety’ index (Brownlee, 1993).

Questions on neighbourhood safety, civic engagement, ability to have a say, networks, trust and social cohesion were drawn from the General Social Survey used by the Australian Bureau of Statistics (Australian Bureau of Statistics, 2010). Of these, the question groups on civic activities, ability to have a say, and social trust were eliminated from the second survey.

Eight questions from the Australian Unity Wellbeing Index (International Wellbeing Group, 2006) were asked in the first survey but not in the second survey.

Both surveys asked open questions, ‘what makes you feel good about living in your suburb?’ and ‘what don’t you like about living in your suburb?’.

Procedure

The survey was piloted at a community activities centre within the survey area. Ten people agreed to trial the survey. They completed the questionnaire and their feedback was used to make adjustments to the questions. The most important change suggested was the addition of domestic violence as a variable to a question on neighbourhood problems. This was added to the items from the General Social Survey (2010). The pre and post questionnaires are provided as Appendices B and C.

The printed questionnaire was distributed to 2600 randomly selected households in the survey area of Greenridge. This area comprises three suburbs, referred to as S, M and D. The area consisted of approximately 16,000 households when the first survey was distributed, and 19,000 households when the second survey was distributed. In October 2013, 2,000 questionnaires were posted to random addresses supplied by the council. In December 2013, another 600 questionnaires were hand delivered to letterboxes in

randomly selected streets in the survey area. In an effort to tap into the online community, the survey was made available online in December 2013. The link was distributed through email networks with the help of the place-based community development officer, and posted on community Facebook pages. A flyer inviting householders to take the survey online was distributed to another random 6,000 households. All online responses were made between 4 – 18 December 2013. All distribution methods were random so it is not known if some households received the survey and/or link more than once. During this period, the Bounty Hotel was closed while being renovated, and re-opened at the end of December 2013 with the 40 poker machines in place. Two hundred and eighteen respondents completed the questionnaire and posted it back, and 39 participants completed it online, yielding a total of 257 responses. Based on an estimate of 16,000 households, 1.6% of households responded to the survey.

The second survey was mailed to the same 2,000 addresses in June 2015, eighteen months after the Bounty Hotel had re-opened with 40 poker machines in place. As the response rate was again very low, another 600 surveys were hand delivered, and flyers were randomly delivered to 6,000 letterboxes in the area inviting people to do the survey online. The link to the survey was once again distributed on neighbourhood Facebook pages. There were 187 responses to the second survey, with 116 returned by mail and 71 completed online. With an estimated increase to 19,000 households by this time, around one percent of households responded to the second survey.

With such low response rates, this sampling strategy did not work well for engaging this population in the research. While hand delivering surveys in the area, I noticed that postal boxes are not a feature of these suburbs, meaning there was an unanticipated level of commitment required from the respondents to actually take their completed surveys to a postal service in an activity centre, probably by car, rather than dropping it into a nearby post box. This may have limited the number of responses. Another limiting

factor may have been the length of the questionnaire which ran to 11 pages in the first version and nine pages in the second.

Results and discussion

There were 257 participants in the first or 'pre' survey, and 187 participants in the second or 'post' survey. The results of the two surveys are reported separately and then compared first on the demographic information provided, second on gambling attitudes and behaviours, and third on community wellbeing. The samples gathered by the two surveys are not proportionately representative of the Greenridge population. The proportion of females and males in both samples (63.1%/36.9% and 58.6%/41.4%) respectively) varied significantly from the population (50.8%) (Chi-square=31.7, *p*=<.0001). The age group of 18-34 years was under-represented in both samples, and the older age groups were over represented when compared to the adult population of Greenridge. The younger age group of 18-34 year-olds make up 40% of the adult Greenridge population but represented 23.8% and 20.1% respectively of the two samples, while 35-59 year-olds which make up 48.2% of the Greenridge population, made up 56.9% and 55.6% respectively of the two samples, with people aged 60 years and over representing 11.7% of the adult population of Greenridge made up 19.4% and 24.3% respectively of the two samples (Chi-square=132.1, *p*=<.0001).

As convenience samples they are not expected to provide ideal representation, and population weighting has not been performed because of the relatively small sample size. The samples are however of adequate size to perform tests of significance at 0.05 probability level between the two groups (Stevens, 1996).

Demographics

First survey

Approximately two-thirds (63%) of participants were female and ages ranged between 18 and 81 years with a median age of 46 years. The distribution across the three suburbs was fairly even (suburb S = 34.1%, suburb M = 36.1%, suburb D = 29.8%). Approximately one-third (32.2%) of respondents had lived in their home for between one

and two years, with a further 25.5% having lived in their home for between three and five years, 32.5% living in their home for more than five years and a small proportion (9.8%) who had lived in their home for less than one year. The majority reported being part of a couple or two-parent family (77.1%). A further 13.3% reported living in a single person household, while 6.2% reported living in a one-parent family with dependent children. Approximately half (56.4%) reported working full time and 17.2% reported part time work, while 21.6% were retired or not in the workforce. A small proportion were students (3.6%) or unemployed (1.2%). A large proportion (44.4%) had either a bachelor or postgraduate degree, with a similar proportion having a diploma or certificate qualification (40.2%). Reported household income was distributed across participants with 19.9% earning up to $51,999, 42.2% earning $52,000 - $103,999, and 37.7% earning $104,000 and over.

Second survey

Of those who reported their gender, 58.6% were female and 41.4% were male. Ages ranged between 20 and 84 years with a median age of 49 years. The distribution across the three suburbs was not even this time (suburb S = 47.8%, suburb M = 21%, suburb D = 31.2%). A large proportion (46.8%) of respondents had lived in their home for more than five years, with a further 34.4% having lived in their home for between three and five years. The remainder had lived in their home for less than one year (9.2%) or between one and two years (9.7%). Two-thirds of participants reported being part of a couple or two-parent family (66.3%). A further 21.7% reported living in a single person household, while nine percent reported living in a one-parent family with dependent children. Approximately half (52.6%) reported working full time and 15% reported part time work, while 24.9% were retired or not in the workforce. A small proportion were students (4.6%) or unemployed (2.9%). Approximately one-third (38.2%) had either a bachelor or postgraduate degree, and around half had a diploma or certificate qualification (48.4%). Reported household income was distributed across participants with 30.8% earning up to $51,999, 40.4% earning $52,000 - $103,999, and 28.8% earning $104,000 and over.

The results given are for the respondents who provided this information. In this survey, a large proportion of respondents did not provide their demographic data, ranging from 9.6% who did not provide their age to 16.6% who did not provide their income.

Comparison

There were many similarities in demographic features between the two samples and the demographic profile of the area, and some differences as well. The respondents who provided their suburb data were fairly evenly distributed among the three suburbs that comprise Greenridge in the first survey, however there is a noticeable reduction of respondents from suburb M, in the second survey (from 36.1% to 21%). This is an interesting result because the Bounty Hotel is located in suburb M, and follow-up participant recruitment efforts of letterboxing and flyer distribution were concentrated in this suburb. Suburb M surrounds the Bounty Hotel with a radius of approximately two kilometres. Suburb D is between one and five kilometres of the Bounty Hotel, and Suburb S is between four and eight kilometres from the venue.

There was a decline in responses from people aged 18-34 years but a corresponding increase from the 60 years and over age group. The length of tenure in the home showed a shift from a shorter tenure of two years or less in the first sample to a longer tenure in the second sample. Short tenure of two years or less changed from 40.8% in the first sample to 18.8% in the second sample. This is in keeping with the time difference of 18 months between surveys. There was a higher proportion of single person household and sole parent respondents to the second survey (from 13.3% to 21.7% and 6.2% to 9% respectively). The rate of 21.7% for lone person households is considerably higher than average for Greenridge (12.1%) and Whittlesea municipality (15.2%) and closer to the rate for Greater Melbourne (23.3%). This could be an indicator of relationship breakdowns, or the older age of the second sample. In keeping with the slightly higher age of respondents, there was a higher proportion of retirees, including pensioners in the second survey compared to the first. When compared to the

Greenridge population, both samples had a higher proportion of people aged 60 years and over, and a lower proportion of people under 35 years. The level of education was slightly lower in the second sample with a lower proportion of people with postgraduate qualifications and higher proportion with trade or certificate qualifications compared to the first sample. The proportion of respondents in both samples in the middle income category was similar, but there was a higher proportion of households on lower incomes and a lower proportion of households on higher incomes in the second sample. A comparison of the demographic features of both samples is shown in Table 26.

Table 26. Comparison of selected demographic data between surveys

Demographic feature		***Survey 1 (pre) %***	***Survey 2 (post) %***
Gender	Male	36.9	41.4
	Female	63.1	58.6
Age distribution	18-34 years	23.8	20.1
	35-59 years	56.9	55.6
	60 plus years	19.4	24.3
Suburb distribution	Suburb S	34.1	47.8
	Suburb M	36.1	21.0
	Suburb D	29.8	31.2
Tenure at home	Less than 12 months	9.8	9.1
	1-2 years	32.0	9.7
	3-5 years	25.8	34.4
	More than 5 years	32.4	46.8
Household type	Single person	13.3	21.7
	Couple with no children	22.4	18.7
	Two parent family with dependent children	40.2	34.3
	One parent family with dependent children	6.2	9.0
	Two parent family with independent children not at home	14.5	13.3
	Other household	3.3	3.0
Work status	Working full time	56.4	52.6
	Working part time	17.2	15.0
	Student	3.6	4.6
	Home duties	6.0	5.2
	Self-funded retiree	4.0	6.4
	Pensioner	11.6	13.3
	Unemployed	1.2	2.9
Qualifications	Postgraduate degree	22.2	15.9
	Bachelor degree	22.2	22.3
	Advanced diploma or Diploma	18.8	16.6
	Certificate I-IV	21.4	31.8
	No qualification	15.4	13.4

Demographic feature		*Survey 1 (pre) %*	*Survey 2 (post) %*
Household Income	Up to $51,999	19.9	30.8
	$52,000 - $103,999	42.4	40.4
	$104,000 and over	37.7	28.8

Gambling behaviour and attitudes

A series of questions were asked about the frequency of visiting poker machine venues in the City of Whittlesea and in Victoria. Respondents to the first survey were asked to predict how often they would visit the Bounty Hotel and how often they would play poker machines once it re-opened, so the responses could be compared to the reported frequency of visits and play in the second survey. Respondents to the first survey were also asked how the installation of poker machines would impact on personal and community wellbeing, which can be compared to the impacts reported in the second survey. A modified version of the Attitude Towards Gambling Scale (Orford et al., 2009) and the Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001) were also administered in both surveys for comparison. Questions that had poor response rates or were not well understood have not been analysed. These were on frequency of playing poker machines by venue, estimates of time and distance travelled to venues, the amount of money spent on machines, changes to time spent playing poker machines, and reason for visiting venues.

First survey

At the time of the first survey, there were nine hotel and club venues providing gambling on poker machines in the City of Whittlesea, although none were located within the area known as Greenridge. To find out how frequently residents of Greenridge visit gaming venues inside and outside the municipality, respondents were asked to indicate how frequently they visited each of the nine venues within Whittlesea, and how often they visited venues anywhere else in Victoria, including neighbouring municipalities. The list did not include licensed venues that did not offer poker machines. Only a small proportion of respondents had visited any of the venues, to patronise either bar, bistro,

children's area or gaming area, within their municipality (ranging from 1.3% to 11% of the sample for each venue). In contrast, more than half (58.8%) had visited a poker machine venue outside the municipality for any reason in the previous six months.

When asked about their visits to the Bounty Hotel before it closed temporarily for renovations and installation of poker machines, 27.3% of respondents said they had visited before it closed. When asked about their intention to visit when the hotel re-opened, 60.7% of respondents planned to visit. When asked about their intention to play poker machines when the Bounty Hotel re-opened, 10.9% of respondents said they would play them once only, 4.3% said they would play them sometimes, 3.9% said they would play them each time they visited.

Answers about playing poker machines were fairly inconsistent with a large number of refusals. The question 'Over the last six months, have you played the pokies?' was answered by 254 of the 257 respondents, with 60 people reporting they did play poker machines in the last six months. When asked about session times playing the poker machines, 81 people reported their length of time playing poker machines. There was a total of 84 people who reported using poker machines or reported their session times in the last six months. These people who comprise 34% of respondents have been identified as poker machine gamblers for further analysis. The majority of poker machine gamblers spent less than one hour on machines (81.5%), and 18.5% spent more than one hour on machines each session on average. The people who played poker machines were spread across income groups, but the larger numbers were in the lower income groups. The poker machine gamblers had household incomes across the range, but a higher proportion of low income respondents were gamblers compared to other income groups. Twenty-one people or 46.7% of the people in the low-income category ($0-51,999) were gamblers, compared to 29.9% of people in the $52,000-103,000 income category, and 30.2% of people in the higher income category ($104,000+). These proportions are based on a total of 228 people who provided their income.

There were 20 respondents having problems with their gambling, measured by the CPGI (Ferris & Wynne, 2001), with 11 people assessed as low risk gamblers, six people were moderate risk gamblers, and three people were in the problem gambling category. Of those having problems with their gambling, all but one who reported their incomes were in the low or medium income categories.

To ask about attitudes toward gambling, the survey used the first nine items of the 14-item Attitude Towards Gambling Scale (ATGS) (Orford et al., 2009), and adapted five items specifically on the gambling environment in Victoria from the Victorian Longitudinal Study 2003 (McMillen et al., 2004). On a scale of 1 to 5, a high score is indicative of a positive attitude towards gambling. The mean score on the shortened ATGS was 2.35 and each of the gambling environment questions yielded a mean of less than 3.0 indicating a negative attitude toward gambling.

Finally, respondents were asked to anticipate their satisfaction with the community once the poker machines were introduced. A small proportion (19.5%) of people thought their level of happiness living in the area would be affected with more people saying they would be unhappy (22.6%) than happy (4.3%), but half of respondents (52.1%) did not think their happiness would be affected. The anticipated impact on levels of contentment and wellbeing reported were similar to those on happiness. However, more than half of respondents (57.6%) thought the introduction of poker machines would have a negative impact on the social character of the area.

Second survey

Patronage of licensed poker machine venues in the municipality, for any reason including bar, bistro, or gaming area by the second survey respondents ranged between 0.6% and 16% of respondents at each of the venues, excluding the Bounty Hotel. More than half the respondents (56.2%) had also visited venues outside the municipality.

More than half of the respondents (51.5%) had visited the Bounty Hotel since it re-opened, and 25% of those reported using the poker machines. Being a fairly small sample, this means there were only 22 people who said they played the poker machines at the Bounty Hotel, with just one saying they played each time they visited.

There were 57 respondents who were identified as poker machine players, comprising 32.4% of respondents. More than half of poker machine players (68.4%) played for less than one hour and 26.3% played for one to three hours. Nineteen of these gamblers reported low household income ($0-51,999) and they comprised 40.4% of all respondents in that income group. There were 17 gamblers who reported a medium household income of $52,000-103,999 and they comprised 27% of respondents in that income category. Thirteen gamblers were in the higher income category of $104,000 and above, and they comprised 28.9% of respondents in that income category. The proportions given are for those who reported their income and gambling status which was a total of 155 participants out of the sample of 187.

Twelve respondents to the survey were having problems with their gambling with six people in the low risk category, three people in the moderate risk category and three people in the problem gambling category. They were spread across income groups with five people in the low income category, three in the medium income category, and three people in the higher income category. One person who was in the problem gambling category did not provide their income.

Attitudes towards gambling were scored with a mean result of 2.29, indicating a negative attitude toward gambling.

Respondents were asked about the impact of the introduction of poker machines on their personal levels of happiness, contentment and wellbeing, as well as on the social character of the area. The majority of respondents (66.8%) thought their level of happiness was unaffected, while 16.6% reported their happiness was affected. Of the 31

respondents who were affected, 30 were unhappy or very unhappy and one was unsure. Levels of contentment and wellbeing were fairly similar with only one respondent experiencing increased contentment and wellbeing. A large proportion (47.1%) believed the introduction of poker machines had a negative impact on the social character of the area, while 40.1% believed it had no impact and 3.2% believed it had a positive impact.

A new set of questions was introduced in the second survey to ask about personal knowledge and experience of gambling problems of others in the local area. Twelve people, or 6.4% of the sample knew someone who had a problem with poker machine gambling before the installation of poker machines at the Bounty Hotel. Eight respondents knew someone who had developed a problem since the re-opening of the Bounty Hotel. Of those, two people reported that the person lived with them. When asked about their experience of knowing a person having problems with their gambling, three people reported experiencing emotional problems, five people reported financial problems, and four people reported relationship problems.

Comparison between surveys

Respondents to both surveys were asked about their visits to poker machine venues within the City of Whittlesea and outside the municipality. There was little difference between the two groups, with the largest proportion of both groups attending venues outside the municipality before and after the re-opening of the Bounty Hotel. The table below lists the poker machine venues in the City of Whittlesea, excluding the Bounty Hotel. The second group had a higher attendance at most venues within the municipality, and slightly lower attendance outside the municipality. In both groups, it is clear that apart from the Bounty Hotel, venues within the municipality are not particularly popular and that people are prepared to travel further when attending a venue that has poker machines for any reason, not necessarily gambling. Several people noted on their questionnaire that they travelled to Crown Casino in central Melbourne. The re-opening of the Bounty Hotel has seen patronage from half the respondents, with very little change

to patronage of other venues. Most venues in the municipality were visited by a higher proportion of respondents in post survey, with only two venues visited by a smaller proportion, while venues outside the municipality were visited by a slightly smaller proportion. This indicates that at least from people in the local area, there is virtually no transfer of business from other venues. Residential proximity to poker machine venues is known to increase gambling activity (Department of Justice, 2009; Marshall, 2005; Productivity Commission, 1999a; Young et al., 2012b) and this research found that while participation decreased, intensity of play measured by time spent playing increased. This could be due to closer proximity of the new venue allowing more time for play, or an effect of the normalisation of gambling (Bestman et al., 2016; Thomas et al., 2012). Table 27 below shows the frequency of visiting poker machine venues.

Table 27. Visits by frequency to poker machine venues within and outside the City of Whittlesea, before and after the re-opening of the Bounty Hotel

	Did not visit or don't know %		Less than once per month %		Once or more per month %		Total visited %	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
Venue 1	86.8	85.4	12.0	13.4	1.3	1.2	13.3	14.6
Venue 2	90.7	89.5	8.9	9.3	2.3	0.0	11.2	9.3
Venue 3	95.7	90.0	3.5	9.4	0.9	0.6	4.4	10.0
Venue 4	94.4	90.5	4.8	9.5	0.9	0.0	5.7	9.5
Venue 5	89.7	84.0	8.2	13.6	2.2	2.4	10.4	16.0
Venue 6	96.6	90.1	3.4	9.3	0.0	0.0	3.4	9.9
Venue 7	98.7	99.4	1.3	0.6	0.0	0.0	1.3	0.6
Venue 8	96.6	95.0	2.1	4.4	1.3	0.6	3.4	5.0
Venue 9	89.2	86.9	9.5	10.6	1.3	2.5	10.8	13.1
Bounty Hotel		48.0		43.3		8.2		51.5
Other *	41.2	43.8	35.7	38.9	23.1	17.3	58.8	56.2

*Venues outside the municipality

At the time of the first survey, the Bounty Hotel was closed while undergoing expansion and renovations. Before it closed, it was a small and basic country hotel offering a bar and meals only. Participants in the first survey were asked if they had attended the Bounty Hotel before it closed, and if they intended to go when it re-opened, including their intention to play poker machines. Participants in the second survey were asked how often they visited since it re-opened and how often they played the poker machines.

A large proportion of people (60.7%) intended to visit the Bounty Hotel when it re-opened in the 'pre' survey, but a smaller number (47.2%) of the respondents to the 'post' survey had actually visited the hotel. This result was inconsistent with answers to each of the venues which indicated that 51.5% had visited the hotel, possibly because the questions were asked in different ways. The results are shown in Table 28.

Table 28. Respondents who visited or intended to visit the Bounty Hotel in pre and post surveys

	Did or will not visit or don't know %	**Less than once per month %**	**Once or more per month %**	**Total visited or to visit %**
Survey 1: pre opening of Bounty Hotel				
Visited Bounty Hotel before closing	72.8	22.2	5.1	27.3
Intention to visit Bounty Hotel when re-opened	39.3	40.1	20.6	60.7
Survey 2: post opening of Bounty Hotel				
Actual visits to the Bounty Hotel after re-opening	50.2	39.0	5.9	47.2

The proportion of people in the 'pre' survey who intended to play the poker machines and 'post' survey who did play the poker machines were fairly similar (19.1% and 17.3% respectively). However, a larger proportion (10.9%) reported they would only play once, and a smaller proportion (4.3%) intended to play sometimes in the 'pre' survey compared to the actual frequency of play, (4.7% played only once and 11.8% play sometimes) in the 'post' survey. Table 29 shows that the proportion of people who reported using machines declined significantly when the Bounty Hotel reopened compared to the proportion who anticipated using them (Chi-square=79.3, p=<.00001). This can be explained by smaller proportions who played once only and those who play each time, even though the proportion of people who reported playing sometimes was much higher than reported by respondents to the first survey.

Table 29. Proportion of respondents who played or intended to use poker machines at the Bounty Hotel in pre and post surveys

	Won't or don't play or don't know %	Play once only %	Play sometimes %	Play each time %	Total play or intention to play %
Survey 1: pre opening of Bounty Hotel					
Intention to play poker machine on re-opening	80.9	10.9	4.3	3.9	19.1
Survey 2: post opening of Bounty Hotel					
Actual poker machine play after re-opening	82.7	4.7	11.8	0.8	17.3

Approximately one in three respondents to both surveys were poker machine gamblers. These participation rates are considerably higher than participation in poker machine playing in the Victorian community of 16.74% in 2014 (Hare, 2015). Poker machine players in the second sample spent significantly more time on the machines compared to those in the first sample (Chi-square=24.3, *p*=<.00001), as shown in Table 30.

Table 30. Respondents who play poker machines and session times

	Survey 1 %	Survey 2 %
Proportion who are poker machine gamblers	32.7	30.5
Session time: less than one hour	81.5	72.2
Session time: more than one hour	18.5	27.8

Of respondents living in low-income households (less than $52,000 per year), a higher proportion gambled on poker machines than the proportion in households with higher incomes. This was consistent between the pre and post samples with no significant change in the proportion of gamblers by income category (Chi-square=6.65, *p*=.42).

Table 31. Poker machine gamblers by income group

Poker machine players as a proportion of sample	Survey 1 %	Survey 2 %
Household income <$52,000	46.7	40.4
Household income $52,000-$103,999	29.9	27.0
Household income $104,000+	30.2	28.9

The Canadian Problem Gambling Index (CPGI) is a widely used 9-item instrument for measuring gambling problems. The items are:

1. Have you bet more than you could really afford to lose?
2. Have you needed to gamble with larger amounts of money to get the same feeling of excitement?
3. When you gambled, did you go back another day to try and win back the money you lost?
4. Have you borrowed money or sold anything to get money to gamble?
5. Have you felt that you might have a problem with gambling?
6. Has gambling caused you any health problems, including stress and anxiety?
7. Have people criticised your playing or told you that you had a gambling problem, regardless of whether or not you thought it was true?
8. Has your gambling caused any financial problems for you or your household?
9. Have you felt guilty about the way you gamble or what happens when you gamble?

The items are scored as: Never=0; Sometimes=1; Most of the time=2; Almost always=3. The scores define the separate categories of problem gambling which are: 0=Non-problem gambling; 1-2=low risk gambling; 3-7=moderate risk gambling; and 8-27=problem gambling. There was no significant difference in the incidence of problem gambling between the two groups (1.2% of respondents in the pre sample, and 1.4% in post sample). Both these rates are higher than the Victorian population rate of 0.81% in 2014 (Hare, 2015), however the present study only tested poker machine gamblers, whereas the Victorian prevalence study included all forms of gambling. As both groups were mainly nongamblers on poker machines, the rates of problem gambling among gamblers was compared. There was a small but significant difference among poker machine players, with 3.7% of gamblers assessed as problem gamblers among respondents to the first survey and 5.7% of the gamblers in the second survey (Chi-square=8.2, p=<.05). Although this amounted to just three people in each survey who fell into the problem gambling category, the situation is serious for those respondents. It is notable that the proportion of respondents reporting they did not play poker machines increased in the post sample (from 68.1% to 75%) but more than one in five poker machine players (24.4% of the pre sample and 22.7% of the post sample) were

experiencing some degree of problems with their gambling. Browne et al (2016) found that harms arising from low-risk gambling alone was considerable. The results for the two sets of participants in the two surveys are shown in Table 32 below.

Table 32. Comparison of rates of problem gambling between the 'pre' and 'post' survey

	N		**Proportion of whole sample %**		**Proportion of gamblers in sample %**	
	Pre	**Post**	**Pre**	**Post**	**Pre** *n*=82	**Post** *n*=53
Nongamblers	175	159	68.1%	75.0%		
Non-problem gamblers	62	41	24.1%	19.3%	75.6%	77.4%
Low risk gamblers	11	6	4.3%	2.8%	13.4%	11.3%
Moderate risk gamblers	6	3	2.3%	1.4%	7.3%	5.7%
Problem gamblers	3	3	1.2%	1.4%	3.7%	5.7%
Total respondents	257	212				
Total gamblers	82	53			100%	100%
Total problems with gambling	20	12	7.8%	5.6%	24.4%	22.7%

In both surveys, non-problem gamblers were more likely to live in higher income households and low risk and moderate risk gamblers were more likely to live in low income households. The very small number of participants who were categorised as problem gamblers were spread across low, medium and high-income households.

Attitudes toward gambling were measured using nine items of the 14-item Attitudes Toward Gambling Scale (ATGS) (Orford et al., 2009) and five items from the Victorian Longitudinal Study of 2003 (McMillen et al., 2004), scored from 1= strongly agree to 5=strongly disagree. Scoring of positively worded items was then reversed so that higher scores were indicative of more favourable attitudes toward gambling on all items. Results were similar for both surveys, with only one item ‘gambling livens up life’ producing a significant difference between samples in which the post sample disagreed more strongly than the pre sample. On the shortened ATGS scale, the mean was 2.34 and 2.29 respectively) with all scores in the neutral to negative range. Negative attitudes were strongest toward aspects of gambling that impact communities such as ‘too many opportunities for gambling’, ‘gambling is dangerous for family life’, ‘gambling is a serious social problem’ and ‘pokies are good for communities’. Attitudes were more neutral

toward statements affecting individual freedoms such as ‘people should have the right to gamble whenever they want’ and ‘it would be better if gambling was banned altogether’. The mean scores for each item are shown in Table 33 below.

Table 33. Attitudes Towards Gambling Items: means, standard deviations, percent agreement and disagreement, and t-tests of significance

	Survey 1 (n=249)			Survey 2 (n=176)			Pre-post	
Item	Mean (sd)	Percent agree or strongly agree	Percent disagree or strongly disagree	Mean (sd)	Percent agree or strongly agree	Percent disagree or strongly disagree	t	Sig (p)
People should have the right to gamble whenever they want [R]	2.79 (1.05)	46.2	28.1	2.82 (1.10)	42.6	28.4	-.28	.39
There are too many opportunities for gambling nowadays	1.79 (0.86)	80.7	3.6	1.80 (0.89)	81.3	4.5	-.12	.45
Gambling should be discouraged	2.12 (1.03)	64.3	8.4	1.95 (0.94)	71.6	5.7	1.66	.95
Most people who gamble do so sensibly [R]	3.40 (1.05)	22.9	51.0	3.27 (1.06)	23.3	40.9	1.25	.89
Gambling is dangerous for family life	1.97 (1.0)	71.9	6.8	1.95 (1.04)	73.9	7.4	.20	.58
On balance gambling is good for society [R]	3.86 (0.93)	6.4	65.4	3.96 (0.91)	5.7	69.9	-1.10	.13
Gambling livens up life [R]	3.21 (0.92)	5.6	69.5	3.98 (1.03)	8.0	72.8	-7.93	0
It would be better if gambling was banned altogether	3.10 (1.15)	24.5	40.5	2.97 (1.27)	33.5	39.8	1.08	.86
Pokies are good for communities [R]	3.86 (0.92)	5.6	65.9	4.0 (0.93)	4.5	69.4	-1.54	.06
Mean Total Attitude Towards Gambling Scale score	**2.34 (0.66)**			**2.29 (0.67)**			**.76**	**.78**
Gambling increases employment	3.21 (1.03)	27.7	37.8	3.38 (1.16)	26.1	45.5	-1.56	.12
Gambling improves social life	3.9 (0.90)	5.6	68.3	3.99 (0.91)	5.1	73.3	-1.00	.16
Gambling is a serious social problem	2.02 (1.02)	71.5	8.8	1.98 (1.08)	75.0	10.3	.39	.65
The increased availability of gambling opportunities can significantly increase the number of problem gamblers	1.93 (0.97)	74.7	6.8	1.87 (1.00)	78.9	7.5	.62	.73
People in communities gamble at the club or hotel because there are few other leisure activities available	2.90 (1.07)	38.2	31.7	2.97 (1.14)	36.2	33.9	.64	.26

[R] = These items have been reverse scored so that all item means above 3.0 indicate average attitude favourable to gambling and those below 3.0 unfavourable.

These results indicate a consistently negative attitude toward gambling in the community before the installation of poker machines, and that did not change significantly after they were installed at the Bounty Hotel.

The results of participants' anticipated impact on community wellbeing were compared to the perceived impact after the machines were installed. In the first survey, questions asked if the respondents' level of happiness, contentment or wellbeing living in the area, would be affected by the installation of poker machines. They were also asked if the social character of the area would be affected, either positively, negatively, or not at all. The second survey asked respondents if their levels of happiness, contentment and wellbeing were affected, and also the effect on the area. In both surveys, the majority of respondents said there would be or was no impact either positive or negative on their personal sense of happiness, contentment and wellbeing. The proportion of people in the first survey who reported an anticipated increase in happiness (3.9%), contentment (4.3%) and wellbeing (1.2%) living in area once the poker machines were introduced was much larger than the proportion in the second survey who reported actual increased happiness, contentment and wellbeing (0.9%, 1.9%, 0.9% respectively). The proportion of respondents who anticipated decreased levels of happiness (22.2%), contentment (19.8%) and wellbeing as a result of the introduction of poker machines was also larger than the proportion in second survey who reported actually feeling these effects (16.5%, 12.3%, 16.1% respectively). Although the two groups were not asked the same question because the first was asked to predict the impact of the presence of poker machines on their levels of happiness, contentment and wellbeing living in area and the second group was asked to report their actual feelings about the impact, tests of significance between the groups showed a significant decline in both positive and negative impact responses and increase in uncertainty or no impact, between the predicted and actual impact of the presence of poker machines on happiness, contentment and wellbeing (Chi-square 31.87, p <0001; 33.38, p <0001; 26.64, p<.0001 respectively). The results however do

show however that the community predicted that happiness, contentment and wellbeing decreased more than it increased but with a smaller proportion reporting both increase and decrease, and a larger proportion reporting they were unsure or there was no change. As there was no venue at all in the area at the time of the first survey, and the venue does offer bistro, children's activities, and live music, it is not surprising that these benefits might mediate any negative impact from the presence of poker machines for some.

When considering the impact on the social character of the area, larger proportions of respondents to the first survey predicted an increase in social character (4.7%) and decrease in social character (57.6%) compared to respondents of the second survey (2.8% increase and 41.5% decrease), while a smaller proportion predicted no change (37.8%) in the first survey compared to 55.7% in the second survey. Although the anticipated impacts were both more positive and more negative than reported impacts (Chi-square 65.24 p<.0001), the patterns were similar in that a larger proportion of respondents to both surveys regarded the introduction of poker machines to negatively impact their community more strongly than themselves personally. The results are shown in Table 34.

Table 34. Comparison of anticipated and actual perceived impact of the poker machines on community wellbeing

	Survey 1			**Survey 2**		
	Will increase percent	Will decrease percent	Will not change or unsure percent	Did increase	Did decrease	Did not change or unsure
Happiness living in the area	3.9	22.2	73.9	0.9	16.5	82.5
Contentment living in the area	4.3	19.8	75.5	1.9	12.3	85.8
Wellbeing living in the area	1.2	25.3	73.5	0.9	16.1	83.0
Social character of the area	4.7	57.6	37.8	2.8	41.5	55.7

An open text question was asked, 'Is there anything else you would like to say about the effect of pokies on community wellbeing?'. There were 107 responses to this question

on the ‘pre’ survey and 45 on the ‘post’ survey, many expressing strong or emotive opinions. On the ‘pre’ survey, seven of these responses were positive toward poker machines, 24 were neutral, and 76 were negative. On the ‘post’ survey, there were no open responses that were positive toward poker machines, eight were neutral, and 37 were negative. The comments that were positive toward poker machines in the ‘pre’ survey suggested that they provided older people with something to ‘spend their money (on) and get out of the house’; ‘there are some who enjoy an occasional flutter’; that people who gamble ‘will have less distance to travel… perhaps leading them to being happier’; that ‘pokies should be available locally’; that they ‘bring cheap meals’. These comments support the perception that poker machines are an enjoyable recreation for some people, and that there are some benefits to the community if they result in subsidised meals and a pub venue that would not otherwise be available.

The comments that were neutral toward poker machines were mostly framed in terms of personal responsibility, with many acknowledging the harmful aspects, and some pointing out community contributions as a balancing factor. Many of the comments that were positive or neutral toward poker machines in both surveys were accompanied by statements about the respondents’ own gambling behaviour, often saying they don’t gamble or don’t gamble much. This is interesting because these qualifications seem to suggest there may be some stigma associated with gambling on poker machines, or the respondents may be wanting to demonstrate their own control over their gambling.

The majority of comments were negative about poker machines at the Bounty Hotel. These are discussed in more detail below.

The text responses to both surveys were then themed using the common traditional gambling frames proposed by Korn, Gibbons and Azmier (2003). Although somewhat subjective, respondents’ remarks were easily fitted to these traditional frames, as shown in Table 35.

Table 35. Pre and Post open text responses by traditional gambling frame

Traditional Gambling Frame	Proportion of open responses	
	Survey 1 %	Survey 2 %
Gambling is a matter of individual freedom	12.2	2.2
Gambling is a recreational activity, a form of entertainment	5.6	6.7
Gambling is a major source of public revenue	1.9	0.0
Gambling provides benefits of increased tourism and employment	0.0	0.0
Gambling addiction is an individual rather than social pathology	10.3	6.7
Gambling is part of our culture	0.0	0.0
Gambling is seen within the context of public accountability, public responsibility, and public health.	75.0	84.4

Expressions of individual freedom were more evident in the first survey than the second, demonstrated by these comments:

Survey 1:

> Pokies should be available locally. Gamblers have the responsibility to decide if they can afford it.
>
> No one is forcing people to attend these premises. People must take responsibility for their actions.

Survey 2:

> It's a person's choice to gamble, just like it is to drink, eat junk food and be unhealthy as we cannot control what an individual does and people ultimately have to take responsibility for their actions instead of blaming everyone else.

Responses that argued that gambling is a form of recreation or entertainment were mostly positive as follows:

Survey 1:

> Older people can spend their money and get out of the house.
>
> A limited number of pokie machines is needed and not too many.

Survey 2:

> [Bounty Hotel] is a great place to eat, meet friends and family, listen to music and at times watch footy and pay $20 in pokies. I don't go for the pokies.

Although not credited as a major source of public revenue, two respondents thought that poker machine gambling provided a community benefit.

> They (pokies) are a problem to problem gamblers, however people who do not have gambling problems are contributing to community activities and sport by playing pokies especially at sports clubs.
>
> As long as venues contribute to charities and the local community from their pokie revenue it shouldn't be a problem.

A small proportion of respondents were of the opinion that gambling problems were an individual issue rather than a social issue:

Survey 1:

> I did at times play pokies more than I felt good about and wasted more money. It is very easy to become addicted to them and I have seen hardship caused by them. At the same time, it is up to each individual and not up to government's dictatorship.

Survey 2:

> People need to be accountable for their own choices. If they gamble more than they can afford then they are stupid!

The majority of respondents to both surveys gave responses that indicated more of a public health way of thinking about poker machine gambling. These comments related to perceptions of social or community impacts that reached beyond the individual gamblers. These have been further broken down into themes of government responsibility; the association with crime and community safety; the impact on families, relationships and health; the impact on community strength and wellbeing; the changed ‘feel’ of venues; and a passionate but unexplained aversion to poker machines.

A large proportion of responses called for better regulation of the gambling industry in order to reduce accessibility or prevent harms, and some called on governments to actively protect the community from poker machine harms:

Survey 1:

> I don't think we need them in our face at local venues. They should be controlled and not accessible in local communities. Keep them at casinos.
>
> It is an attack on the most vulnerable in society. The less well-off suffer the most. There needs to be stricter limits and restrictions on pokie venues.
>
> There should be restrictions in place to protect people from problem gambling (ie. open times, restrictions on amount lost).

Survey 2:

> This community has a huge problem of debt - pokies have had a huge impact on that - the figures prove the amount of $ being lost from family homes - it's disturbing and immoral to make it so easy for problem gamblers and so easy for hotels like [Bounty Hotel] to profit off the community this way.

A small number of respondents expressed fears that the introduction of poker machines would lead to increased crime in the area and reduce community safety.

Survey 1:

> The availability of poker machines could draw criminal interest and lead to robberies which would put the general public at risk.

Survey 2:

> Gambling at Bridge inn hotel has increased significantly the level of crime and drug activity in the area. There have been several thefts of vehicles and from vehicles from around there and at the car park.

Fears about safety within families and households, the impact on the quality of relationships, family violence, and economic resources were a frequently occurring theme.

Survey 1:

> As the area is full of first home owners/younger people, the pokies could cripple a lot of households' cash flow & relationships.
>
> I am not interested in gambling but have many friends that say to me that they go to the pokies occasionally but I often see them going every weekend and cannot stop going as they became addicted. This is affecting relationship and affects me personally as well.
>
> My husband is a gambler, myself and my 2 daughters are living in hell. Please don't allow, there will be more families like us. From the stress my 2 daughters have depression. My husband ruined our lives.

I believe it puts pressure on families with children and mortgages. I also accept that for people on their own it becomes a social venue.

I am the parent of a teenager and I have heard of teenagers who have gambling issues already.

Survey 2:

It negatively affects the time people spend with family and the money available to spend on family.

People spend their money on pokies instead of food for the family.

Pokies cause great harm to people especially families. Increase depression and domestic violence.

I don't like the way they have bistros in the venues where children are involved and think its normal behaviour.

Destroying family units and the partner of the gambler receives little help.

The impact on community strength and wellbeing was the most frequently occurring theme from the responses. Comments reflected concerns about the 'feel' of the community and a sense of being preyed upon, as well as the erosion of social capital and prosperity.

Survey 1:

It decreases the standard of living.

This is a very BAD thing for the community, as those that have an addiction to this will destroy their families. Too much money is lost to the pokies.

When not played sensibly and in moderation it can have a significant impact upon family life, social networks, finances, employment & mental health.

If studies show that it's a bad thing, then don't spoil [Greenridge]. People will start leaving. The good people will leave.

Pokies and gambling create social and economic costs to families and to communities.

Survey 2:

Brings unsavory people to the area when there is already a problem in the district. Just compounds the problems already there.

> Increases level of financial hardship and stress.
>
> People within the community talk about the impact of pokies in this community and it is very negative, it brings down wellbeing by talking about it.
>
> Pokies are financially and socially destructive. They only benefit the owner, not the community.
>
> Pokies are parasites on our society. They contribute nothing.
>
> Happy that machines are in [suburb M] and not [suburb D].

There seems to be some conflict of community values created by the re-opening of the Bounty Hotel. The venue has filled a void in entertainment for the local area, and people have made the decision to attend, with half the 'post' sample having attended the venue, without it impacting on patronage of other venues. This means that people have substituted time and money they may have spent on different activities to attend the Bounty Hotel. The hotel offers opportunities to socialise and relax. Yet, there is also a mistrust of venues with poker machines as can be seen from the comments above. Between 12.3% and 16.5% of respondents to the 'post' survey reported their personal happiness, contentment, or wellbeing had been reduced, and a large proportion (41.5%) felt the venue had a negative impact on the social character of the area.

People are still attracted to the venue even though they don't approve of the main form of entertainment offered. This is demonstrated by the proportion of people who had attended the venue yet still felt the introduction of poker machines had a negative impact. The responses show that there was some difference between people who gambled on poker machines compared to other patrons of the Bounty Hotel. Of the respondents who had visited the hotel since it re-opened, 46.4% felt there was negative impact on the social character of the area and 42.9% thought there was no impact, while 7.1% felt there was a positive impact. Of people who were poker machine players and visitors to the Bounty Hotel, 28.1% believed there was a negative impact, 59.4% believed there

was no impact, and 12.5% thought there was a positive impact. This was significantly less negative than the opinions of non-poker machine players who had visited the hotel, of whom 58.8% thought there was a negative impact, with 33.3% reporting no impact and 3.9% reporting a positive impact (Chi-square=226.32, p<.0001).

Community wellbeing

Community wellbeing was measured in several ways to try to detect if there were differences before and after the poker machines were introduced. Participants were asked about their preference to continue living in their suburb, and what they like and don't like about living there. Two sets of questions were used to obtain scores on community satisfaction and neighbourhood satisfaction. These questions are thought to give a good measure of community strength, and provide two separate indices. An additional item on domestic violence was added to this set of questions. Social capital was measured on two aspects, social cohesion and networks. These factors are beneficial to communities but are dependent on the social resources that flow from positive social networks and cooperative relationships (Baum, 2016).

First survey

Participants were asked about the strength of their preference to continue living in their suburb. The majority of participants (80.9%) expressed a preference to stay. The things that were mentioned as positive toward the suburb were mostly to do with the natural and social environment, such as 'a country feel' of space and friendliness. The negative aspects were 'hoon' driving, or driving dangerously or causing a nuisance and lack of infrastructure. In particular, there was dissatisfaction with congested roads, and lack of schools and public transport.

Sense of community as experienced by participants in relation to their neighbourhood was measured by rating a series of statements on five-point rating scales (from 1=strongly disagree to 5=strongly agree). The mean score for Sense of Community was

3.64. The six items relating to Sense of Belonging had a mean score of 3.57 and the score for the two items relating to Sense of Safety was 3.85.

Most respondents reported at least one neighbourhood problem (88.3%). The most serious neighbourhood problems related to safety from social disorder. Respondents reported noisy driving (73.4%) and dangerous driving (70.5%), followed by graffiti (43.8%) and property damage (39.4%).

The majority of respondents (70.1%) had attended a local community event in the past six months. About half (50.2%) of participants were actively involved in a social group or taken part in any activity organised by these groups. A smaller proportion (37.7%) were involved in a community support group, and only 20.6% were involved in a civic group.

The strength of networks is an important aspect of community wellbeing. The majority of respondents (74.1%) reported definitely being able to get help from friends, family and neighbours when needed. A further 24.3% reported sometimes being able to get help when needed. The majority (98%) of participants reported recently visiting with friends and 57.6% used social media for social networking.

Second survey

Two thirds (66.9%) of participants expressed a preference to continue living in their suburb. Positive aspects of living in their suburb were the semi-rural environment, attractive homes, and quiet peaceful neighbourhoods. The negative aspects mentioned were antisocial behaviour particularly with driving dangerously, and inconsiderate neighbours, along with lack of infrastructure, continued growth and social isolation. The mean score for Sense of Community in the second sample was 3.49. The score for Sense of Belonging was 3.44 and for Sense of Safety it was 3.66.

About nine out of ten participants (88.9%) reported at least one neighbourhood problem. The most serious neighbourhood problems in relation to safety from social disorder

reported were dangerous driving (73.8%), noisy driving (72.9%), graffiti (49.5%) and property damage (47.3%).

Slightly more than half of respondents (54.1%) had attended a community event in the past six months and 47.1% were actively involved in a social group. A smaller proportion (31.6%) were involved in a community support group, and 21.4% were involved in a civic group.

The proportion of respondents who reported being able to definitely get help from friends, family or neighbours was 70%. A further 27.2% reported sometimes being able to get help. Only 2.8% reported not being able to get help at all. Most respondents (98.3%) reported recently visiting with friends or family, and 46.2% reported using social media.

Comparison between surveys

The results indicated a shift in preference to continue living in the present suburb from the pre to post surveys, with fewer people wanting to stay and more people wanting to leave in the post survey group (Chi-square=14.4, *p*=<.01). The results are shown in Table 36.

Table 36. Preference to remain in suburb by proportion of respondents in each survey

Preference to remain in present suburb	**Pre %**	**Post %**
Strong preference to stay	55.6	44.8
Moderate preference to stay	25.3	22.2
No preference or don't know	8.6	7.1
Moderate preference to leave	6.6	9.0
Strong preference to leave	3.5	4.7

Respondents to both surveys were fairly similar in their likes and dislikes of where they live. Many found the peaceful and rural surroundings appealing, but found road use to be the most negative aspect, especially with traffic congestion and antisocial behaviour on the roads. While friendly neighbours were often cited as positives, neighbours were also often cited as negatives through lack of consideration or interest in others.

The mean scores for each of the items on the Sense of Community scale for both surveys are shown in Table 38. Higher scores indicate more positive attitudes. The second sample rated each item lower than the first sample.

Table 37. Mean scores and standard deviation for agreement with Sense of Community items

Item	Pre	Post
It is safe to walk around the neighbourhood at night	3.85 (.88)	3.61 (.96)
Children are safe walking around during the day	3.85 (.83)	3.70 (.88)
People in my neighbourhood are very willing to help each other out	3.66 (.88)	3.52 (.85)
I have a lot in common with people in this neighbourhood	3.33 (.90)	3.24 (.79)
I generally trust my neighbours to look out for my property	3.91 (.97)	3.64 (.99)
I would be really sorry if I had to move away from the people in my neighbourhood	3.28 (1.03)	3.02 (1.03)
I have little to do with people in this neighbourhood[R]	2.92 (1.07)	2.84 (.95)
People in my neighbourhood make it a difficult place to live[R]	1.82 (.81)	1.96 (.73)

[R]Negatively worded item scores were reversed when summing to scale scores

All the item scores were summed to a Sense of Community score, and the first two items were summed to a Sense of Safety score, and the remaining six items formed a Sense of Belonging score. The results reflect a consistent but not significant decline in ratings on all three indices, as shown in Table 38.

Table 38. Mean scores, standard deviations and t-tests of significance on Sense of Community Indexes

Scale mean	Pre	Post	Pre-post change	
	n=253	n=184	t	Sig (p)
Sense of Community	3.64 (.64)	3.49 (.57)	2.5	.99
Sense of Belonging	3.57 (.72)	3.44 (.63)	2.0	.98
Sense of Safety	3.85 (.76)	3.66 (.82)	2.5	.99

A large proportion of respondents to both surveys reported at least one neighbourhood problem. Noisy and dangerous driving were the top two problems reported in both surveys. The largest difference between survey responses were using or dealing drugs (from 18.5% to 37.5%), and domestic violence (from 17.3% to 34.2%). Both were mostly considered a small problem, however there was a large increase in the proportion of respondents rating drugs and domestic violence as big or moderate problems. Although there is no evidence that increased awareness of domestic violence among survey

respondents is linked to gambling, there is research evidence of a strong link between gambling and family violence (Dowling, 2014; Dowling et al., 2015; Markham, Doran, et al., 2016; Suomi et al., 2013). Table 39 reveals some growing dissatisfaction in living in the area on all items.

Table 39. Proportion of respondents reporting neighbourhood problems, with Chi-square tests of significance

Item	Big problem		Moderate problem		Small problem		Not a problem		Pre-post change	
	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %	Chi-square	Sig (p)
Noisy driving	10.0	19.3	27.1	24.9	36.3	28.7	26.7	27.1	39.4	<.0001
Dangerous driving	14.7	21.9	25.5	21.3	30.3	30.6	29.5	26.2	19.9	<.001
People being insulted, pestered or intimidated in the street	0.8	2.2	5.6	7.1	8.4	14.2	85.2	76.5	27.9	<.0001
Public drunkenness	0.0	1.6	2.8	2.2	10.8	15.8	86.5	80.4	25.6	<.0001
Rowdy behaviour	2.0	1.6	2.8	7.6	21.0	22.8	74.2	67.9	26.1	<.0001
Offensive language	3.2	4.3	4.8	7.6	13.5	25.5	78.6	62.5	22.3	<.0001
Domestic violence	1.6	4.4	2.8	11.6	12.9	16.6	82.7	67.4	96.2	<.0001
Noisy neighbours	4.0	4.4	6.4	13.2	25.9	25.3	63.7	57.1	27.5	<.0001
People using or dealing drugs	1.2	9.9	3.2	9.4	14.1	18.2	81.5	62.4	129.3	<.0001
Graffiti	2.8	8.2	12.0	9.9	28.9	31.3	56.2	50.5	32.5	<.0001
Intentional damage to property other than graffiti	3.2	4.3	8.4	15.2	27.7	27.7	60.6	52.7	26.7	<.0001

Social cohesion was measured by attendance at local community events and active involvement or participation in social, community support or civic groups. Community events were described as the kind that bring people together, such as a fete or festival, school concert, or farmers market. Social groups were described as involvement or participation in organised sport or physical recreation, arts or heritage groups, religious or spiritual groups, craft or hobby groups, adult education groups, ethnic or multicultural groups, or social clubs involving bars or restaurants. Community support groups were

described as organised groups providing assistance to others such as service clubs, welfare organisations, education and training, parenting, children and youth, health promotion, emergency services, or international aid and development. Civic groups were described as trade unions, professional or technical associations, political parties, environmental or animal welfare groups, human and civil rights groups, body corporates or tenants' associations, or consumer organisations. There was a significant reduction in social cohesion measured by attendance at community events and involvement with community support groups, but no significant change in participation in social groups or civic groups. The results are shown below in Table 40.

Table 40. Proportion of respondents involved or participating in indicators of social cohesion with Chi-square tests of significance

Social cohesion	**Pre %**	**Post %**	**Pre-post change**	
			Chi-square	Sig (p)
Attended a community event	70.1	54.1	53.7	<.0001
Involved or participated in a social group	50.2	47.1	1.93	.17
Involved or participated in a community support group	37.7	31.6	8.22	<.01
Involved or participated in a civic group	20.6	21.4	0.19	.66

The strength of networks is considered by comparing the data on personal networks. The changes between surveys were fairly small, with a reduced, but not significant ability to get help when needed, and a significant reduction in time spent on social media. The results are shown in Table 41.

Table 41. Proportion of respondents by indicators of personal networks

Personal networks		**Pre %**	**Post %**	**Pre-post change**	
				Chi-square	Sig (p)
Able to get help from friends, family and neighbours when needed	Yes, definitely	72.4	70.0	5.82	.05
	Sometimes	23.7	27.2		
	No, not all	1.6	2.8		
Seen family and friends in the last 3 months	Yes	96.1	98.3	2.78	.09
	No	2.0	1.1		
Spent time on internet social networking sites	Yes	57.6	52.4	5.49	<.05
	No	42.4	47.6		

The findings from this research show a decline in community wellbeing on a number measures since the installation of the poker machines at the Bounty Hotel. The community is undergoing rapid change and the cause of this decline is likely to be a combination of factors associated with life in the urban growth area. Poker machine gambling does seem to have an impact on this community, with a higher proportion of respondents than average who use the machines and experience problems as a result of gambling on them. The most recent Victorian prevalence study found that in 2014, an estimated 15.22% of Victorian adults played poker machines in the previous year (Hare, 2015). In contrast, the present study found that 31.9% of respondents to the first survey and 24.9% of respondents to the second survey had played poker machines within the last six months and 18 months respectively. Furthermore, of those who do play poker machines, the incidence of problems with gambling is quite high with 7.8% of gamblers in the 'pre' survey and 5.6% of gamblers in the 'post' survey experiencing a degree of 'problem' gambling as measured by the Canadian Problem Gambling Index. This is reporting on fairly small numbers of people, but the two surveys show some consistency with gambling behaviours and problems. Similarly, there was consistency in attitudes toward gambling and the impact of poker machines on the social character of the area. These attitudes were less favourable toward gambling in the second survey as were measures of community wellbeing, but not significantly so. There is a discomfort with poker machines in the community, and it seems with good reason as this research has shown that one in four or five people who play them experiences some degree of problem. The community has serious problems with traffic congestion and lack of public transport. Other issues reported are antisocial behaviour particularly in cars, and increased disquiet over drug problems and family violence. The proportion of respondents who reported domestic violence to be a problem in their neighbourhood almost doubled from 17.3% in the first survey to 34.2% in the second survey.

All of these pressures, together with very few options for alternative recreation in the area, indicate that a newly created community on the urban fringe is unlikely to have the social resources to provide a protective effect against the impact of poker machines.

Conclusion

The aim of this research was to find out if introducing poker machines to a community had a measurable impact on community wellbeing. Australia is unique in the way that poker machines have become embedded in local communities rather than confined to destination venues such as casinos.

Large scale population studies have found that a proportion of the community is being harmed by gambling, as measured by the rate of problem gambling. This has been a very useful instrument which has allowed us to see that there are effects of accessibility for example. But problem gambling alone is not sufficient to determine the impact of gambling on communities (Young, 2013). Problem gambling at the severe level affects less than one percent of the population, but we also know that many more people are affected, either as a result of their relationship to a person being harmed by gambling, their own less severe experiences of gambling harm, or the way the presence of poker machine gambling might change or shape the feel of the place where they live. The challenge of this research was to find a way to measure community wellbeing and its relationship to gambling before and after pokies are installed. The government regulator granted the licence for this venue on the basis that it would benefit the community, or at the very least, not be detrimental.

In their study of the impact of new casino on a Niagara Falls community in Canada, Room, Turner and Ialomiteau (1999) found that impacts were not experienced to the same degree as expected, but they did find that participation and problem gambling increased, and reports of problems experienced among friends and relatives increased. This research has some similar findings. After poker machines were installed at the local hotel, community wellbeing in the area seemed to have deteriorated on every measure that was used. Unexpectedly, the base line rates for participation in gambling on poker machines and problem gambling found in the pre survey were already higher than on

average for Victoria. When the first survey of this study was conducted, people needed to travel up to 10 kilometres to the nearest poker machine venue depending on where they lived. When the Bounty Hotel re-opened, all residents of Greenridge were within five to six kilometres of the venue. Given the distance in the first instance, it was surprising at first to find such a high participation rate. This could be explained by a number of factors. The municipality has higher than average per capita losses meaning that participation is likely to be higher. Living in the growth area means very few recreation and entertainment choices are available, especially at night. Many of the respondents commented positively on the number of young families in the area and the enjoyment derived from living in a family focussed area. In the municipality there are very few venues that offer a family friendly night out that are not poker machine venues, which means it's possible that gambling has become more normalised in the area. The home ownership ambitions of families in this area makes them vulnerable to unplanned expenses such as gambling losses. As many respondents pointed out, mortgages in their area are high and gambling could put serious pressure on household budgets and relationships.

The length of time spent playing poker machines was longer in the second group. This may also be explained by normalisation, but could also reflect the closer proximity of the new venue. Also reflective of the wider population, despite decreased participation, problem gambling increased very slightly. The numbers are too small in these samples to be conclusive, but the small numbers of problem gamblers in both samples made up a significant proportion of gamblers nonetheless. While problem gamblers (from any form of gambling) comprise 0.81% of the Victorian population (Hare, 2015), they comprised 1.2% of the Greenridge sample in the pre survey and 1.4% in the post survey (on poker machines). In reality, this was just three people in both samples that scored in the high risk category for problem gambling. Expressed as a proportion of the population, these rates of problem gambling are still relatively low, but when applied to those who actually

played poker machines, this research found that one in every four or five people who played poker machines in both samples were having problems, categorised as low, medium or high risk (23.8% and 21.1% respectively).

In the post survey, participation had decreased, but problem gambling and the amount of time spent on poker machines increased. This is consistent with the most recent Victorian population survey which found a large drop in participation in poker machine gambling, a slight but not significant increase in problem gambling, and higher intensity of play as measured by frequency of visits (Hare, 2015). The pre survey did not ask about knowledge of gambling problems among people known to respondents, but the post survey asked for retrospective information on this. There were 12 respondents who reported knowing someone in the local area who had a problem with poker machine gambling before the Bounty Hotel re-opened, and a further eight people reported knowing someone who had developed problems after the hotel re-opened. Two of those people were part of the respondent's own household. The personal experiences of the respondents of knowing someone with a gambling problem were financial, relationship and emotional problems.

Sense of community, sense of belonging, sense of safety, social cohesion and personal networks were all reduced in the second sample. The second survey also showed that reported neighbourhood problems had increased, particularly in relation to drug use and domestic violence. The reports of domestic violence are from respondents and not from police reports, but the large increase in reporting of this as a neighbourhood problem is noteworthy. Several respondents mentioned family violence amongst their concerns with the installation of poker machines in the open text responses. The prevalence of family violence especially in proximity to higher densities of poker machines has been given higher weight in recent decisions of the Victorian gaming regulator. Moderate to considerable weight was applied to a recent application for additional poker machines that was refused in an area that had both higher than average density of poker machines

and prevalence of family violence ("Noble Park Football Club Social Club to vary the number of electronic gaming machines from 50 to 70," 2017).

Fewer people wanted to stay in the area, and more people wanted to leave in the post survey compared to the pre survey. This decline in community wellbeing could be due to a range of factors and changes that occurred at the same time as the introduction of poker machines. Some of the problems mentioned by respondents included rapid growth, not knowing their neighbours, traffic congestion, hoon driving, drugs and domestice violence. All of these factors were mentioned in the pre poker machines survey, so worsening of these factors could contribute to reduced community strength, which may also reduce resilience to pressures on the community. At the same time, there were a number of respondents who knew of someone who had developed a gambling problem since the Bounty Hotel re-opened, and two of those lived with a person who had developed a problem.

Respondents to the first survey were asked to indicate how they would feel about poker machines in their area, considering both their personal wellbeing and that of the community. Most people thought their personal wellbeing would not be affected, but a majority thought that the social character of the area would be impacted. This was echoed in the second survey in which a substantial proportion reported that the social character of the area had indeed been negatively affected. This validates the presence of poker machines having at least some contribution to the decline in community wellbeing.

This pre-post study adds to the literature on the impact of poker machines in one of the first countries in the world to deregulate poker machine gambling. There was a decline in community wellbeing, and higher intensity of playing poker machines and slightly higher rate of problem gambling among a smaller proportion of people. The installation of poker machines in the community are likely to have contributed to this finding. At the very

least, the presence of poker machines may be one of several factors facing people living in the growth areas which includes a short supply of entertainment venues. I think the findings of this research at least dispute the 'no net detriment' finding of the VCGLR in granting the gaming licence, and may be used as evidence at least a precautionary nature if opposing gaming applications on the grounds of social impact. Many of the participants were well-informed of the problems related to poker machine gambling and gave real-life examples of harm. This research has also shown that the majority of people who participated in the surveys subscribe to a public health view of poker machine gambling. This is demonstrated in various ways. The general attitude towards gambling was unfavourable with a slightly more negative view in the second survey. The large majority of people who made comments in both surveys indicated that either more government regulation and prevention was needed, or expresssed concern at the level of harm within the community. As the gambling environment introduced to this area was created by public policy, many of the comments from community members were holding the government to account to prevent harm to the community.

Asking for comments on the survey was one of the strengths of this study. The results articulated community perceptions of the impact of poker machines in ways that weren't captured by the survey questions. The level of community harm from poker machines was more evident in these open comments than could be found by measures of problem gambling. The harms described had themes that were in keeping with Langham et al.'s taxonomy of harms – financial, relationship, emotional, health, cultural, performance, and crime (Langham et al., 2016).

The survey area was large, comprising three adjacent suburbs, none of which had a poker machine venue. However, there was no indication that people living in this broader growth area thought of it as 'their community'. The three suburbs have a different look and feel about them and can be described as three separate communities.

Focussing the study on just suburb M in which the Bounty Hotel is located may have provided more localised results.

There was a very low response rate overall to the survey, and it was particularly low in suburb M where the hotel is located. As there is a level of stigma associated with gambling, gaining trust and talking directly with people may have provided a more detailed picture of how the Bounty Hotel sits within the community. This could be an interesting follow up to this study, as the hotel had only been open for 18 months at the time of the second survey.

Further refinement of survey questions could provide data that can be benchmarked to existing data across larger communities. For example, replicating the questions on the Victorian Population Health Survey and Social Capital Survey would provide comparison between smaller communities to their municipalities and surrounding areas. The questions on the impact of poker machines on personal and community wellbeing need to improved to provide greater clarity to the respondent and more nuanced information on the actual impacts of poker machines in a variety of ways.

Social and economic impact assessment is critical to decision-making on introducing or increasing poker machines in a community. There have been recommendations made previously for local government and the Victorian gambling regulator to jointly develop a set of indicators that address the determinants of harmful gambling (South Australian Centre for Economic Studies, 2005a; Victorian Auditor-General, 2010). I now add my voice to this proposal. These indicators could include a community questionnaire, available data on health and wellbeing and social capital, in addition to indicators of socioeconomic disadvantage. Community surveys in particular need to be refined to gain the confidence of the VCGLR, so that the community voice is heard and respected. This would truly enable the last point of the Victorian Responsible Gambling Foundation's definition of responsible gambling, 'Being responsive to community

concerns around gambling' to be realised by the gambling regulator. Having agreement on social and economic indicators that are reliable and based on research will remove much of the subjectivity from decision-making. It could also cause applicants to adequately test the impact of their proposals on the community before they are provided to councils for costly review.

Appendix A: Plain Language Information Statement, Survey 1

Plain Language Information Statement

University of Ballarat
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SCHOOL OF EDUCATION AND ARTS

PROJECT TITLE:	**The Impact of the Introduction of Electronic Gaming Machines on Communities: Health and Wellbeing Consequences**
PRINCIPAL RESEARCHER:	**Professor John McDonald**
OTHER/STUDENT RESEARCHERS:	**Diana Bell, postgraduate research student**

Dear resident of the City of Whittlesea,

As a postgraduate research student at the University of Ballarat, I would like to invite you to participate in a community survey about poker machines.

The survey aims to gather information from residents of South Morang, Mernda and Doreen. At present this community does not have any pokie venues, but this will change when the Bridge Inn Hotel reopens soon with 40 pokie machines. This survey is part of larger study looking at the impact of poker machines on health and wellbeing in communities. It is very important that we get information from people who play the pokies and from people who don't play them. A repeat of the survey after the pokie machines are established will allow us to detect any changes to behaviour or sense of wellbeing as a result of this newly introduced form of entertainment.

To participate in this study all that is required is 15 minutes of your time to fill in the attached questionnaire. The questionnaire contains a range of questions that aim to assess community happiness, personal happiness and gambling use and attitudes.

Your answers will be completely anonymous. Your name is not required on the questionnaire and your responses will be kept secure and remain confidential and will not identify you in any way. When completed and returned, your questionnaire will form part of a larger database, from which only group data will be analysed and reported.

There are no right or wrong answers for any of these questions; we are only interested in what you think. Please answer the questions as honestly and accurately as possible and remember that your answers will be anonymous and confidential. If you feel you would like to be a participant in this study please fill in the enclosed questionnaire and return it to us in the postage-paid envelope.

Please note that as your involvement in this project is ***completely voluntary***, you are free to withdraw from the study at any time. Please understand that once you have completed and returned the questionnaire, we will be unable to identify your questionnaire from the others, thus withdrawal at that stage will not be possible. Returning the completed questionnaire indicates that you understand the nature of the research and freely consent to participate in the study.

If you feel upset as a result of participating in this study please contact your local doctor or phone Lifeline on 13 11 14. Lifeline is a free, confidential, telephone counselling service, available 24 hours a day. Alternatively, you may wish to contact Gambler's Help on 1800 858 858 (available 24 hours per day, 7 days a week, and is free, anonymous and confidential) or www.gamblinghelponline.org.au.

If you have any questions concerning this study please contact my supervisor Professor John McDonald at the University of Ballarat on (03) 5327 9611 or email j.mcdonald@ballarat.edu.au.

The findings of this research will be posted on the bulletin board at the City of Whittlesea Offices, South Morang once the study has been completed. The findings will also be posted on the project website http://www.adieh.com.au/cb_pages/research_projects.php.

Yours faithfully,
Diana Bell

Plain Language Information Statement

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PLEASE FILL IN THE ATTACHED QUESTIONNAIRE AND POST IT BACK TO US IN THE ENCLOSED POSTAGE PAID ENVELOPE

Please retain this letter for your information

If you have any questions, or you would like further information regarding the project titled 'The Impact of the Introduction of Electronic Gaming Machines on Communities: Health and Wellbeing Consequences', please contact the Principal Researcher, Professor John McDonald of the School of Education and Arts:

PH: 5327 9611
EMAIL: j.mcdonald@ballarat.edu.au

Should you (i.e. the participant) have any concerns about the ethical conduct of this research project, please contact the University of Ballarat Ethics Officer, Research Services, University of Ballarat, PO Box 663, Mt Helen VIC 3353. Telephone: (03) 5327 9765, Email: ub.ethics@ballarat.edu.au

CRICOS Provider Number 00103D

Appendix B: Plain Language Information Statement, Survey 2

Plain Language Information Statement

Federation UNIVERSITY • AUSTRALIA

FACULTY OF EDUCATION AND ARTS

PROJECT TITLE:	**The Impact of the Introduction of Electronic Gaming Machines on Communities: Health and Wellbeing Consequences**
PRINCIPAL RESEARCHER:	**Professor John McDonald**
OTHER/STUDENT RESEARCHERS:	**Diana Bell, postgraduate research student**

Dear resident of the City of Whittlesea,

As a postgraduate research student at Federation University, I would like to invite you to participate in the second stage of a community survey about poker machines.

The survey aims to gather information from residents of South Morang, Mernda and Doreen. Previously, this community did not have any pokie venues, but changed when the Bridge Inn Hotel reopened in December 2013 with 40 poker machines. This survey is part of larger study looking at the impact of poker machines on health and wellbeing in communities. It is very important that we get information from people who play the pokies and from people who don't play them. As we are looking at community impacts, it is not necessary to survey the same people. The first survey was conducted before the poker machines were established, and this repeat will allow us to detect any changes to community wellbeing as a result of this newly introduced form of entertainment.

To participate in this study all that is required is 10 minutes of your time to fill in the attached questionnaire. The questionnaire contains a range of questions that aim to assess community happiness, personal happiness and gambling use and attitudes.

Your answers will be completely anonymous. Your name is not required on the questionnaire and your responses will be kept secure and remain confidential and will not identify you in any way. When completed and returned, your questionnaire will form part of a larger database, from which only group data will be analysed and reported.

There are no right or wrong answers for any of these questions; we are only interested in what you think. Please answer the questions as honestly and accurately as possible and remember that your answers will be anonymous and confidential. If you feel you would like to be a participant in this study please fill in the enclosed questionnaire and return it to us in the postage-paid envelope.

Please note that as your involvement in this project is ***completely voluntary***, you are free to withdraw from the study at any time. Please understand that once you have completed and returned the questionnaire, we will be unable to identify your questionnaire from the others, thus withdrawal at that stage will not be possible. Returning the completed questionnaire indicates that you understand the nature of the research and freely consent to participate in the study.

If you feel upset as a result of participating in this study please contact your local doctor or phone Lifeline on 13 11 14. Lifeline is a free, confidential, telephone counselling service, available 24 hours a day. Alternatively, you may wish to contact Gambler's Help on 1800 858 858 (available 24 hours per day, 7 days a week, and is free, anonymous and confidential) or www.gamblinghelponline.org.au.

If you have any questions concerning this study please contact my supervisor Professor John McDonald at Federation University on (03) 5327 9611 or email j.mcdonald@federation.edu.au.

The findings of this research will be posted on the bulletin board at the City of Whittlesea Offices, South Morang once the study has

Plain Language Information Statement

Federation UNIVERSITY • AUSTRALIA

ıeen completed. The findings will also be ıosted on the project website ıttp://www.adieh.com.au/cb_pages/research_ ırojects.php.

Yours faithfully,
Diana Bell

ΤHERE ARE TWO WAYS TO DO THIS SURVEY:

FILL IN THE ATTACHED QUESTIONNAIRE AND POST IT BACK TO US IN THE ENCLOSED POSTAGE PAID ENVELOPE

or

COMPLETE THE SURVEY ONLINE AT:

www.merndasurvey.com

Please retain this letter for your information

If you have any questions, or you would like further information regarding the project titled 'The Impact of the Introduction of Electronic Gaming Machines on Communities: Health and Wellbeing Consequences', please contact the Principal Researcher, Professor John McDonald of the Faculty of Education and Arts:

PH: 5327 9611
EMAIL: j.mcdonald@federation.edu.au

Should you (i.e. the participant) have any concerns about the ethical conduct of this research project, please contact the Federation University Ethics Officer, Research Services, Federation University, PO Box 663, Mt Helen VIC 3353. Telephone: (03) 5327 9765, Email: research.ethics@federation.edu.au

CRICOS Provider Number 00103D

Appendix C: Ethics Approval

Ethics approval to conduct research on human participants for this study was received from the Human Research and Ethics Committee (HREC) at the University of Ballarat, project reference no. A10-077.

Approval

Human Research Ethics Committee

University of Ballarat
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Principal Researcher:	John McDonald	
Associate/Student Researcher/s:	Helen Aucote Angela Murphy Diana Bell	Robert Watson Deborah Greenslade
School/Section:	SEA	
Project Number:	A10-077	
Project Title:	The community impacts of electronic gaming machines	
For the period:	27/3/2013 to 31/12/2013	

Please quote the Project No. in all correspondence regarding this application.

REPORTS TO HREC:

An annual report for this project must be submitted to the Ethics Officer on:
23 July 2013
http://www.ballarat.edu.au/research/research-services/forms/ethics-forms

A final report for this project must be submitted to the Ethics Officer on:
31 January 2014
http://www.ballarat.edu.au/research/research-services/forms/ethics-forms

Ethics Officer
27 March 2013

Please see attached 'Conditions of Approval'.

CRICOS Provider No. 00103D

Page 1 of 2

Approval

Human Research Ethics Committee

University of Ballarat
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CONDITIONS OF APPROVAL

1. The project must be conducted in accordance with the approved application, including any conditions and amendments that have been approved. You must comply with all of the conditions imposed by the HREC, and any subsequent conditions that the HREC may require.

2. You must report immediately anything which might affect ethical acceptance of your project, including:

   - Adverse effects on participants;
   - Significant unforeseen events;
   - Other matters that might affect continued ethical acceptability of the project.

3. Where approval has been given subject to the submission of copies of documents such as letters of support or approvals from third parties, these must be provided to the Ethics Office before the research may commence at each relevant location.

4. Proposed changes or amendments to the research must be applied for, using a 'Request for Amendments' form, and approved by the HREC before these may be implemented.

5. If an extension is required beyond the approved end date of the project, a 'Request for Extension' should be submitted, allowing sufficient time for its consideration by the committee. Extensions cannot be granted retrospectively.

6. If changes are to be made to the project's personnel, a 'Changes to Personnel' form should be submitted for approval.

7. An 'Annual Report' must be provided by the due date specified each year for the project to have continuing approval.

8. A 'Final Report' must be provided at the conclusion of the project.

9. If, for any reason, the project does not proceed or is discontinued, you must advise the committee in writing, using a 'Final Report' form.

10. You must advise the HREC immediately, in writing, if any complaint is made about the conduct of the project.

11. You must notify the Ethics Office of any changes in contact details including address, phone number and email address.

12. The HREC may conduct random audits and / or require additional reports concerning the research project.

Failure to comply with the *National Statement on Ethical Conduct in Human Research* (2007) and with the conditions of approval will result in suspension or withdrawal of approval.

Appendix C: First survey

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Australian Government
Australian Research Council

VLGA

City of Whittlesea

YOUR LOCAL AREA – COMMUNITY CHARACTERISTICS

These questions are about community characteristics and your satisfaction with it

1. **Where do you live?**

☐ South Morang ☐ Mernda ☐ Doreen

2. **How long have you lived at your current home?**

☐ Less than 6 months ☐ 6 – 11 months ☐ 1 -2 years ☐ 3 – 5 years ☐ More than 5 years

3. **Thinking about the suburb in which you live, how strong is your preference to continue living here?**

☐ Strong preference to stay ☐ Moderate preference to stay ☐ Unsure/No preference to stay or leave ☐ Moderate preference to leave ☐ Strong preference to leave

4. **Thinking about the last six months, please indicate how much you agree with each of the following statements about your neighbourhood?**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is safe to walk around the neighbourhood at night	○	○	○	○	○
Children are safe walking around the neighbourhood during the day	○	○	○	○	○
People in my neighbourhood are very willing to help each other out	○	○	○	○	○
I have a lot in common with people in this neighbourhood	○	○	○	○	○
I generally trust my neighbours to look out for my property	○	○	○	○	○
I would be really sorry if I had to move away from the people in my neighbourhood	○	○	○	○	○
I have little to do with people in this neighbourhood	○	○	○	○	○
People in my neighbourhood make it a difficult place to live	○	○	○	○	○

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Australian Government
Australian Research Council

VLGA
Connecting Communities
Strengthening Democracy

City of Whittlesea

5. **Thinking about the last six months, have you considered any of the following to be a problem in your neighbourhood?**

Statement	A big problem	A moderate problem	A small problem	Not a problem
Noisy driving	○	○	○	○
Dangerous driving	○	○	○	○
People being insulted, pestered or intimidated in the street	○	○	○	○
Public drunkenness	○	○	○	○
Rowdy behaviour	○	○	○	○
Offensive language	○	○	○	○
Domestic violence	○	○	○	○
Noisy neighbours	○	○	○	○
People using or dealing drugs	○	○	○	○
Graffiti	○	○	○	○
Intentional damage to property other than graffiti	○	○	○	○

6. **What makes you feel good about living in your suburb?**

7. **What don't you like about living in your suburb?**

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LIFE SATISFACTION

These questions are about your quality of life and feelings of empowerment

8. **The following questions ask how satisfied you feel, on a scale from 0 - 10.**
0 means you feel completely dissatisfied. 10 means you feel completely satisfied.
The middle of the scale is 5, which means you feel neutral, neither satisfied nor dissatisfied.

	Completely Dissatisfied					Neutral					Completely Satisfied
Question	0	1	2	3	4	5	6	7	8	9	10
How satisfied are you with your standard of living?											
How satisfied are you with your health?											
How satisfied are you with what you are achieving in life?											
How satisfied are you with your personal relationships?											
How satisfied are you with how safe you feel?											
How satisfied are you with feeling part of your community?											
How satisfied are you with your future security?											

9. **Over the last six months, have you engaged in any of these civic activities?** Tick all that apply

- ☐ Participated in a community consultation or public meeting
- ☐ Written to the local council or contacted a councillor
- ☐ Contacted a member of parliament
- ☐ Signed a petition
- ☐ Attended a protest march, meeting or rally
- ☐ Written a letter to the editor of a newspaper
- ☐ Participated in a political campaign
- ☐ Deliberately bought or boycotted products for environmental, ethical or political reasons
- ☐ Engaged in none of these in the last 6 months

10. **How often do you feel you are able to have a say on issues that are important to you?**

Statement	All of the time	Most of the time	Some of the time	A little of the time	None of the time
With your family or friends	○	○	○	○	○
Within the general community	○	○	○	○	○

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11. How strongly do you agree or disagree that you can trust the following people or institutions?

Statement	Strongly agree	Some-what agree	Neither agree nor disagree	Some-what disagree	Strongly disagree	Don't know
Most people can be trusted	○	○	○	○	○	○
Your doctor can be trusted	○	○	○	○	○	○
Hospitals can be trusted	○	○	○	○	○	○
Police in your local area can be trusted	○	○	○	○	○	○
Police outside your local area can be trusted	○	○	○	○	○	○

SOCIAL COHESION

These questions are about your involvement with your local community

12. In the last six months have you attended a local community event that brings people together, such as a fete or festival, school concert, farmers market or other community events?

☐ Yes ☐ No ☐ Don't know

13. In the last six months have you been actively involved in any of these social groups, or taken part in any activity they organised? (Tick all that apply)

☐ Sport or physical recreation group (e.g. walking group, dance class)
☐ Craft or hobby group
☐ Social clubs providing restaurants or bars
☐ Arts or heritage group
☐ Adult education or special interest group
☐ Other (please specify)
☐ Religious or spiritual group or organisation
☐ Ethnic or multicultural group or club
☐ No active involvement in social groups

14. In the last six months, have you been actively involved in any of these community support groups or taken part in an activity they organised? (Tick all that apply)

☐ Service clubs
☐ Parenting / children / youth
☐ International aid and development
☐ Welfare organisations
☐ Health promotion and support
☐ No active involvement in community support groups
☐ Education and training
☐ Emergency Services
☐ Other

15. In the last six months have you been actively involved in any of these groups or taken part in an activity they organised? (Tick all that apply)

☐ Trade union, professional or technical association
☐ Environmental or animal welfare group
☐ Consumer organisation
☐ Political party
☐ Human and civil rights group
☐ Other civic or political organisation
☐ Civic group or organisation
☐ Body corporate or tenants' association
☐ No active involvement in civic or government groups

16. **If you have not been actively involved in social, community or civic groups, or taken part in an activity they organised, what is the main reason?** (Tick one answer)

- ☐ No transport
- ☐ Financial reasons
- ☐ No childcare available
- ☐ Not interested
- ☐ No time
- ☐ Discrimination because of ethnic or cultural background
- ☐ No groups in local area
- ☐ Not convenient
- ☐ Health reasons
- ☐ Other (please specify)

NETWORKS

These questions are about your personal networks

17. **Can you get help from friends, family and neighbours when needed?**
    - ☐ Yes, definitely
    - ☐ Sometimes
    - ☐ No, not at all

18. **In the last 3 months have you seen family or friends (who do not live with you)?**
    - ☐ Yes
    - ☐ No
    - ☐ No family and no friends

19. **In the last 3 months have you had other types of contact with family or friends (who do not live with you)?** (Tick all that apply)
    - ☐ Phone calls
    - ☐ Email or social media
    - ☐ SMS
    - ☐ Mail
    - ☐ Other (please specify)
    - ☐ No contact

20. **In the last 3 months have you participated in any of these informal social activities?** (Tick all that apply)
    - ☐ Visited or was visited by friends
    - ☐ Went out with or met group of friends – indoor activities
    - ☐ Other informal social activities
    - ☐ Went out with or met group of friends – outdoor activities
    - ☐ Spent time on internet social networking sites
    - ☐ No informal social activities

21. **Do you personally know someone in any of the following types of organisations that you would feel comfortable contacting for information or advice?** (Tick all that apply)
    - ☐ State or federal government
    - ☐ Trade union
    - ☐ Religious/spiritual group
    - ☐ Local council
    - ☐ Political party
    - ☐ School related group
    - ☐ Legal system
    - ☐ Media
    - ☐ Big or small business
    - ☐ Health system
    - ☐ University or TAFE
    - ☐ No

22. **Are you on a decision making board or committee, such as a corporate board, school council, sports club committee, church committee, body corporate or resident action group?**
    - ☐ Yes
    - ☐ No

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PUBS AND CLUBS WITH POKIES

These questions ask about how frequently you visit the pubs and clubs either within or outside the City of Whittlesea, and when you play the pokies.

23. For the venues visited in the last six months, please tick how often you visited (either bar, bistro, children's area, gaming area). (Tick one answer for each venue)

Venue	Did not visit	Visited less than once per month	Visited once or twice per month	Visited more than twice per month	Don't know
Bundoora Hotel	○	○	○	○	○
Casa D'Abruzzo	○	○	○	○	○
Epping Hotel	○	○	○	○	○
Epping Plaza Hotel	○	○	○	○	○
Epping RSL	○	○	○	○	○
Excelsior Hotel	○	○	○	○	○
Lalor Bowling Club	○	○	○	○	○
Plough Hotel	○	○	○	○	○
Whittlesea Bowls Club	○	○	○	○	○
Other venues in Victoria	○	○	○	○	○

24. For the venues visited in the last six months, please tick how often you played the pokies. (Tick one answer for each venue)

Venue	Did not play the pokies	Played less than once per month	Played once or twice per month	Played more than twice per month	Don't know
Bundoora Hotel	○	○	○	○	○
Casa D'Abruzzo	○	○	○	○	○
Epping Hotel	○	○	○	○	○
Epping Plaza Hotel	○	○	○	○	○
Epping RSL	○	○	○	○	○
Excelsior Hotel	○	○	○	○	○
Lalor Bowling Club	○	○	○	○	○
Plough Hotel	○	○	○	○	○
Whittlesea Bowls Club	○	○	○	○	○
Other venues in Victoria	○	○	○	○	○

25. The Bridge Inn Hotel in Mernda (corner of Bridge Inn Rd. and Plenty Rd.) is currently closed for renovations. Before the temporary closure, how often did you visit the Bridge Inn Hotel?

☐ Did not visit ☐ Visited less than once per month ☐ Visited once or twice per month ☐ Visited more than twice per month ☐ Don't know

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26. **When the Bridge Inn Hotel reopens, how often do you think you will visit the venue?** (Bar, bistro, children's play area, gaming room)

☐ I don't expect to visit at all ☐ Less than once per month ☐ Once or twice per month ☐ More than twice per month ☐ Don't know

27. **If you expect to visit the Bridge Inn Hotel when it reopens, how often do you think you will play the pokies?**

☐ I don't plan to play the pokies at all ☐ I will play the pokies sometimes but not always ☐ I will try the pokies only once

☐ I will probably play the pokies each time ☐ Don't know ☐ I don't plan to visit this venue

PLAYING THE POKIES

The next questions ask about your gambling on pokies in Victoria over the last six months

28. **Over the last six months, have you played the pokies?**

☐ Yes, in the local area ☐ Yes, outside the local area ☐ No, not at all

29. **When you visit venues that have pokies, do you go for a social outing or to play the pokies?**

☐ For a social outing ☐ To play the pokies ☐ Both ☐ Varies

30. **When you play the pokies, for how long would you normally play in one session?**

☐ Less than 1 hour ☐ 1-3 hours ☐ 3-6 hours ☐ More than 6 hours ☐ Don't play the pokies (go to Q36)

31. **Thinking about the last time you played the pokies at a club or pub, how far did you travel to get there?** (If you can't estimate the distance, please estimate the travel time)

Kilometres or Minutes

32. **Thinking about the last time you played the pokies, how much money did you spend?**

$

33. **Compared to six months ago, would you say that the amount of time you spend playing the pokies has changed?**

☐ Increased ☐ Decreased ☐ No change ☐ Don't know

34. **If your pokies activity has changed in the last six months, can you tell us the reason?**

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35. **Thinking about playing the pokies in the last six months, please tick one answer for each question**

Question	Never	Sometimes	Most of the time	Almost always	Don't know
Have you bet more than you could really afford to lose?	○	○	○	○	○
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	○	○	○	○	○
When you gambled, did you go back another day to try and win back the money you lost?	○	○	○	○	○
Have you borrowed money or sold anything get money to gamble?	○	○	○	○	○
Have you felt that you might have a problem with gambling?	○	○	○	○	○
Has gambling caused you any health problems, including stress and anxiety?	○	○	○	○	○
Have people criticised your playing or told you that you had a gambling problem, regardless of whether or not you thought it was true?	○	○	○	○	○
Has your gambling caused any financial problems for you or your household?	○	○	○	○	○
Have you felt guilty about the way you gamble or what happens when you gamble?	○	○	○	○	○

EFFECTS OF POKIES ON COMMUNITY WELLBEING

These questions are about your anticipated community satisfaction when the pokie machines are installed at the Bridge Inn Hotel.

36. **Will your level of happiness living in this area be affected by the installation of pokies?**
☐ Yes ☐ No ☐ Unsure

37. **If yes, what will your level of happiness be when the pokie machines are installed?**
☐ Very unhappy ☐ Unhappy ☐ Unsure ☐ Happy ☐ Very happy

38. **Will your level of contentment living in this area be affected by the installation of pokies?**
☐ Yes ☐ No ☐ Unsure

39. **If yes, what will your level of contentment be when the pokie machines are installed?**
☐ Very discontented ☐ Discontented ☐ Unsure ☐ Contented ☐ Very contented

40. **Will the sense of wellbeing you currently experience living in the area be affected by the installation of pokie machines at the Bridge Inn Hotel?**
☐ Yes ☐ No ☐ Unsure

41. **Which of the following best describes how you would feel when the pokies are introduced? My sense of wellbeing living in the community will:**
☐ Greatly decrease ☐ Decrease ☐ Not change ☐ Increase ☐ Greatly increase

42. **How do you believe the introduction of pokie machines at the Bridge Inn Hotel will impact on the social character of the area? It will have a:**
☐ Negative impact ☐ No impact ☐ Positive impact

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YOUR ATTITUDES TOWARD GAMBLING

These questions are about your opinions of gambling in general, and its place in the community

43. Please indicate how much you agree or disagree with the following statements about gambling:

Statement	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
People should have the right to gamble whenever they want	○	○	○	○	○
There are too many opportunities for gambling nowadays	○	○	○	○	○
Gambling should be discouraged	○	○	○	○	○
Most people who gamble do so sensibly	○	○	○	○	○
Gambling is dangerous for family life	○	○	○	○	○
On balance gambling is good for society	○	○	○	○	○
Gambling livens up life	○	○	○	○	○
It would be better if gambling was banned altogether	○	○	○	○	○
Pokies are good for communities	○	○	○	○	○
Gambling increases employment	○	○	○	○	○
Gambling improves social life	○	○	○	○	○
Gambling is a serious social problem	○	○	○	○	○
The increased availability of gambling opportunities can significantly increase the number of problem gamblers	○	○	○	○	○
People in communities gamble at the club or hotel because there are few other leisure activities available	○	○	○	○	○
Gambling increases employment	○	○	○	○	○
Gambling improves social life	○	○	○	○	○
Gambling is a serious social problem	○	○	○	○	○
The increased availability of gambling opportunities can significantly increase the number of problem gamblers	○	○	○	○	○

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44. Is there anything else you would like to say about the effect of pokies on community wellbeing?

DEMOGRAPHIC INFORMATION
These questions are about you and your household

45. What was your age last birthday? _____

46. Are you male or female?

☐ Male ☐ Female

47. Which of the following best describes your household?

☐ Single person
☐ Couple with no children
☐ Two parent family with dependent children
☐ Other related individuals
☐ Group household (not related)
☐ One parent family with dependent children
☐ Two parent family with independent children not at home
☐ Other

48. Which of the following best describes your work status?

☐ Working fulltime
☐ Working part time
☐ Student
☐ Home duties
☐ Self-funded retiree
☐ Pensioner
☐ Unemployed (or looking for work)

49. What is the level of the highest qualification you have completed?

☐ Postgraduate degree
☐ Bachelor degree
☐ Advanced diploma or Diploma
☐ Certificate I - IV
☐ No qualification
☐ Other (please specify)

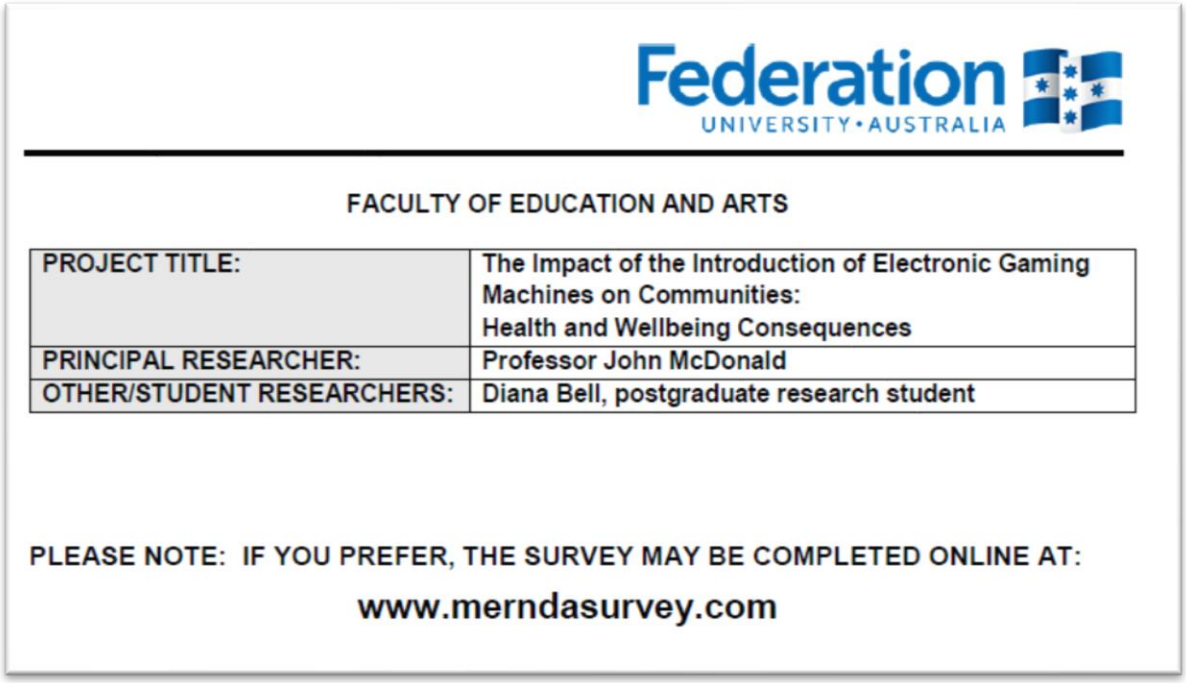
50. What is your annual household income from all sources before tax? Include income from all household members.

☐ $1 - $10,399 per year
☐ $10,400 - $15,599
☐ $15,600 - $20,799
☐ $20,800 - $31,199
☐ $31,200 – $41,599
☐ $41,600 - $51,999
☐ $52,000 - $64,999
☐ $65,000 - $77,999
☐ $78,000 - $103,999
☐ $104,000 - $129,999
☐ $130,000 – $155,999
☐ $156,000 - $181,999
☐ $182,000 – $207,999
☐ $208,000 - $259,000
☐ $260,000 or more
☐ Nil income

Thank you, we appreciate the time taken to participate in this study.

PLEASE POST THE SURVEY BACK TO US IN THE ENCLOSED POSTAGE PAID ENVELOPE

Appendix D: Second survey



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FACULTY OF EDUCATION AND ARTS

PROJECT TITLE:	The Impact of the Introduction of Electronic Gaming Machines on Communities: Health and Wellbeing Consequences
PRINCIPAL RESEARCHER:	Professor John McDonald
OTHER/STUDENT RESEARCHERS:	Diana Bell, postgraduate research student

PLEASE NOTE: IF YOU PREFER, THE SURVEY MAY BE COMPLETED ONLINE AT:

www.merndasurvey.com

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YOUR LOCAL AREA – COMMUNITY CHARACTERISTICS

These questions are about community characteristics and your satisfaction with it

1. **Where do you live?**

☐ South Morang ☐ Mernda ☐ Doreen

2. **How long have you lived at your current home?**

☐ Less than 6 months ☐ 6 – 11 months ☐ 1 -2 years ☐ 3 – 5 years ☐ More than 5 years

3. **Thinking about the suburb in which you live, how strong is your preference to continue living here?**

☐ Strong preference to stay ☐ Moderate preference to stay ☐ Unsure/No preference to stay or leave ☐ Moderate preference to leave ☐ Strong preference to leave

4. **Thinking about the last six months, please indicate how much you agree with each of the following statements about your neighbourhood?**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is safe to walk around the neighbourhood at night	○	○	○	○	○
Children are safe walking around the neighbourhood during the day	○	○	○	○	○
People in my neighbourhood are very willing to help each other out	○	○	○	○	○
I have a lot in common with people in this neighbourhood	○	○	○	○	○
I generally trust my neighbours to look out for my property	○	○	○	○	○
I would be really sorry if I had to move away from the people in my neighbourhood	○	○	○	○	○
I have little to do with people in this neighbourhood	○	○	○	○	○
People in my neighbourhood make it a difficult place to live	○	○	○	○	○

5. **Thinking about the last six months, have you considered any of the following to be a problem in your neighbourhood?**

Statement	A big problem	A moderate problem	A small problem	Not a problem
Noisy driving	○	○	○	○
Dangerous driving	○	○	○	○
People being insulted, pestered or intimidated in the street	○	○	○	○
Public drunkenness	○	○	○	○
Rowdy behaviour	○	○	○	○
Offensive language	○	○	○	○
Domestic violence	○	○	○	○
Noisy neighbours	○	○	○	○
People using or dealing drugs	○	○	○	○
Graffiti	○	○	○	○
Intentional damage to property other than graffiti	○	○	○	○

6. **What makes you feel good about living in your suburb?**

7. **What don't you like about living in your suburb?**

SOCIAL COHESION

These questions are about your involvement with your local community

8. **In the last six months have you attended a local community event that brings people together, such as a fete or festival, school concert, farmers market or other community events?**

☐ Yes ☐ No ☐ Don't know

9. **In the last six months have you been actively involved in any of these social groups, or taken part in any activity they organised?** (Tick all that apply)

☐ Sport or physical recreation group (e.g. walking group, dance class)
☐ Craft or hobby group
☐ Social clubs providing restaurants or bars
☐ Arts or heritage group
☐ Adult education or special interest group
☐ Other (please specify)
☐ Religious or spiritual group or organisation
☐ Ethnic or multicultural group or club
☐ No active involvement in social groups

10. **In the last six months, have you been actively involved in any of these community support groups or taken part in an activity they organised?** (Tick all that apply)

☐ Service clubs
☐ Parenting / children / youth
☐ International aid and development
☐ Welfare organisations
☐ Health promotion and support
☐ No active involvement in community support groups
☐ Education and training
☐ Emergency Services
☐ Other

11. **In the last six months have you been actively involved in any of these groups or taken part in an activity they organised?** (Tick all that apply)

☐ Trade union, professional or technical association
☐ Environmental or animal welfare group
☐ Consumer organisation
☐ Political party
☐ Human and civil rights group
☐ Other civic or political organisation
☐ Civic group or organisation
☐ Body corporate or tenants' association
☐ No active involvement in civic or government groups

12. **If you have not been actively involved in social, community or civic groups, or taken part in an activity they organised, what is the main reason?** (Tick one answer)

☐ No transport
☐ No childcare available
☐ No time
☐ Financial reasons
☐ Not interested
☐ Discrimination because of ethnic or cultural background
☐ No groups in local area
☐ Not convenient
☐ Health reasons
☐ Other (please specify)

NETWORKS

These questions are about your personal networks

13. Can you get help from friends, family and neighbours when needed?

☐ Yes, definitely ☐ Sometimes ☐ No, not at all

14. In the last 3 months have you seen family or friends (who do not live with you)?

☐ Yes ☐ No ☐ No family and no friends

15. In the last 3 months have you had other types of contact with family or friends (who do not live with you)? (Tick all that apply)

☐ Phone calls ☐ Email or social media ☐ SMS
☐ Mail ☐ Other (please specify) ☐ No contact

16. In the last 3 months have you participated in any of these informal social activities? (Tick all that apply)

☐ Visited or was visited by friends ☐ Went out with or met group of friends – indoor activities ☐ Other informal social activities
☐ Went out with or met group of friends – outdoor activities ☐ Spent time on internet social networking sites ☐ No informal social activities

17. Do you know of anyone in the local area who had a problem with poker machine gambling before the beginning of last year (2014)?

☐ Yes ☐ No ☐ Don't know

18. Do you know of anyone in the local area who has developed a problem with poker machine gambling since the beginning of last year (2014)?

☐ Yes ☐ No (go to Q.21) ☐ Don't know

19. Does this person live with you?

☐ Yes ☐ No

20. Have you experienced any of the following problems because of this person's gambling? (Tick all that apply)

☐ Emotional ☐ Financial ☐ Relationships
☐ Other (please specify) ☐ Haven't experienced any problems ☐ Don't know

PUBS AND CLUBS WITH POKIES

These questions ask about how frequently you visit the pubs and clubs either within or outside the City of Whittlesea, and when you play the pokies.

21. For the venues visited in the last eighteen months, please tick how often you visited (either bar, bistro, children's area, gaming area). (Tick one answer for each venue)

Venue	Did not visit	Visited less than once per month	Visited once or twice per month	Visited more than twice per month	Don't know
Bridge Inn Hotel	○	○	○	○	○
Bundoora Hotel	○	○	○	○	○
Casa D'Abruzzo	○	○	○	○	○
Epping Hotel	○	○	○	○	○
Epping Plaza Hotel	○	○	○	○	○
Epping RSL	○	○	○	○	○
Excelsior Hotel	○	○	○	○	○
Lalor Bowling Club	○	○	○	○	○
Plough Hotel	○	○	○	○	○
Whittlesea Bowls Club	○	○	○	○	○
Other venues in Victoria	○	○	○	○	○

22. For the venues visited in the last eighteen months, please tick how often you played the pokies. (Tick one answer for each venue)

Venue	Did not play the pokies	Played less than once per month	Played once or twice per month	Played more than twice per month	Don't know
Bridge Inn Hotel	○	○	○	○	○
Bundoora Hotel	○	○	○	○	○
Casa D'Abruzzo	○	○	○	○	○
Epping Hotel	○	○	○	○	○
Epping Plaza Hotel	○	○	○	○	○
Epping RSL	○	○	○	○	○
Excelsior Hotel	○	○	○	○	○
Lalor Bowling Club	○	○	○	○	○
Plough Hotel	○	○	○	○	○
Whittlesea Bowls Club	○	○	○	○	○
Other venues in Victoria	○	○	○	○	○

23. **How often do you visit the Bridge Inn Hotel?** (Bar, bistro, or gaming room)

☐ I don't visit at all ☐ Less than once per month ☐ Once or twice per month ☐ More than twice per month ☐ Don't know

24. **If you visit the Bridge Inn Hotel, how often do you play the pokies?**

☐ I don't play the pokies at all ☐ I play the pokies sometimes but not always ☐ I tried the pokies only once

☐ I play the pokies each time ☐ Don't know ☐ I don't visit this venue

PLAYING THE POKIES

The next questions ask about your gambling on pokies in Victoria over the last eighteen months

25. **Over the last eighteen months, have you played the pokies anywhere in Victoria?**

☐ Yes, in the local area ☐ Yes, outside the local area ☐ No, not at all

26. **When you visit venues that have pokies, do you go for a social outing or to play the pokies?**

☐ For a social outing ☐ To play the pokies ☐ Both ☐ Varies

27. **When you play the pokies, for how long would you normally play in one session?**

☐ Less than 1 hour ☐ 1-3 hours ☐ 3-6 hours ☐ More than 6 hours ☐ Don't play the pokies (go to Q33)

28. **Thinking about the last time you played the pokies at a club or pub, how far did you travel to get there?** (If you can't estimate the distance, please estimate the travel time)

Kilometres or Minutes

29. **Thinking about the last time you played the pokies, how much money did you spend?**

$

30. **Compared to eighteen months ago, would you say that the amount of time you spend playing the pokies has changed?**

☐ Increased ☐ Decreased ☐ No change ☐ Don't know

31. **If your pokies activity has changed in the last eighteen months, can you tell us the reason?**

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32. Thinking about playing the pokies in the last eighteen months, please tick one answer for each question

Question	Never	Sometimes	Most of the time	Almost always	Don't know
Have you bet more than you could really afford to lose?	○	○	○	○	○
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	○	○	○	○	○
When you gambled, did you go back another day to try and win back the money you lost?	○	○	○	○	○
Have you borrowed money or sold anything get money to gamble?	○	○	○	○	○
Have you felt that you might have a problem with gambling?	○	○	○	○	○
Has gambling caused you any health problems, including stress and anxiety?	○	○	○	○	○
Have people criticised your playing or told you that you had a gambling problem, regardless of whether or not you thought it was true?	○	○	○	○	○
Has your gambling caused any financial problems for you or your household?	○	○	○	○	○
Have you felt guilty about the way you gamble or what happens when you gamble?	○	○	○	○	○

EFFECTS OF POKIES ON COMMUNITY WELLBEING

These questions are about your community satisfaction when the poker machines were installed at the Bridge Inn Hotel.

33. Was your level of happiness living in this area affected by the installation of pokies?

☐ Yes ☐ No ☐ Unsure

34. If yes, what was your level of happiness when the pokie machines were installed?

☐ Very unhappy ☐ Unhappy ☐ Unsure ☐ Happy ☐ Very happy

35. Was your level of contentment living in this area affected by the installation of pokies?

☐ Yes ☐ No ☐ Unsure

36. If yes, what was your level of contentment when the pokie machines were installed?

☐ Very discontented ☐ Discontented ☐ Unsure ☐ Contented ☐ Very contented

37. Was the sense of wellbeing you previously experienced living in the area affected by the installation of pokie machines at the Bridge Inn Hotel?

☐ Yes ☐ No ☐ Unsure

38. Which of the following best describes how you felt when the pokies were introduced? My sense of wellbeing living in the community:

☐ Greatly decreased ☐ Decreased ☐ No change ☐ Increased ☐ Greatly increased

39. How do you believe the introduction of pokie machines at the Bridge Inn Hotel has impacted on the social character of the area? It has had a:

☐ Negative impact ☐ No impact ☐ Positive impact

YOUR ATTITUDES TOWARD GAMBLING

These questions are about your opinions of gambling in general, and its place in the community

40. Please indicate how much you agree or disagree with the following statements about gambling:

Statement	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
People should have the right to gamble whenever they want	○	○	○	○	○
There are too many opportunities for gambling nowadays	○	○	○	○	○
Gambling should be discouraged	○	○	○	○	○
Most people who gamble do so sensibly	○	○	○	○	○
Gambling is dangerous for family life	○	○	○	○	○
On balance gambling is good for society	○	○	○	○	○
Gambling livens up life	○	○	○	○	○
It would be better if gambling was banned altogether	○	○	○	○	○
Pokies are good for communities	○	○	○	○	○
Gambling increases employment	○	○	○	○	○
Gambling improves social life	○	○	○	○	○
Gambling is a serious social problem	○	○	○	○	○
The increased availability of gambling opportunities can significantly increase the number of problem gamblers	○	○	○	○	○
People in communities gamble at the club or hotel because there are few other leisure activities available	○	○	○	○	○

41. Is there anything else you would like to say about the effect the pokies have had on community wellbeing?

DEMOGRAPHIC INFORMATION
These questions are about you and your household

42. What was your age last birthday? _____

43. Are you male or female?

☐ Male ☐ Female

44. Which of the following best describes your household?

☐ Single person ☐ Couple with no children ☐ Two parent family with dependent children ☐ Other related individuals

☐ Group household (not related) ☐ One parent family with dependent children ☐ Two parent family with independent children not at home ☐ Other

45. Which of the following best describes your work status?

☐ Working fulltime ☐ Working part time ☐ Student ☐ Home duties
☐ Self-funded retiree ☐ Pensioner ☐ Unemployed (or looking for work)

46. What is the level of the highest qualification you have completed?

☐ Postgraduate degree ☐ Bachelor degree ☐ Advanced diploma or Diploma
☐ Certificate I - IV ☐ No qualification ☐ Other (please specify)

47. What is your annual household income from all sources before tax? Include income from all household members.

☐ $1 - $10,399 per year ☐ $31,200 – $41,599 ☐ $78,000 - $103,999 ☐ $182,000 – $207,999
☐ $10,400 - $15,599 ☐ $41,600 - $51,999 ☐ $104,000 - $129,999 ☐ $208,000 - $259,000
☐ $15,600 - $20,799 ☐ $52,000 - $64,999 ☐ $130,000 – $155,999 ☐ $260,000 or more
☐ $20,800 - $31,199 ☐ $65,000 - $77,999 ☐ $156,000 - $181,999 ☐ Nil income

Thank you, we appreciate the time you have taken to participate in this study.

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References

Abbott, M., Binde, P., Clark, L., Hodgins, D., Korn, D., Pereira, A., . . . Williams, R. (2015). *Conceptual framework of harmful gambling: An international collaboration Revised Edition*. Guelph, Ontario: Gambling Research Exchange Ontario (GREO).

Abdollahnejad, M. R., Delfabbro, P., & Denson, L. (2014). The clustering of psychiatric disorders in high-risk gambling populations. *Journal of Gambling Studies, 30*(4), 933-947. doi:10.1007/s10899-013-9392-7

Adams, P. J. (2008). *Gambling, Freedom and Democracy*. New York: Routledge.

Adams, P. J. (2009). Redefining the gambling problem: The production and consumption of gambling profits. *Gambling Research: Journal of the National Association for Gambling Studies (Australia), 21*(1), 51-54.

Adams, P. J. (2011). Ways in which gambling researchers receive funding from gambling industry sources. *International Gambling Studies, 11*(2), 145-152. doi:10.1080/14459795.2011.601316

Adams, P. J., Raeburn, J., & de Silva, K. (2009). A question of balance: prioritizing public health responses to harm from gambling. *Addiction, 104*(5), 688-691. doi:10.1111/j.1360-0443.2008.02414.x

Adams, P. J., & Rossen, F. (2012). A tale of missed opportunities: pursuit of a public health approach to gambling in New Zealand. *Addiction, 107*(6), 1051-1056. doi:10.1111/j.1360-0443.2012.03800.x

Allen Consulting Group, Problem Gambling Research and Treatment Centre, & Social Research Centre. (2011). Social and Economic Impact Study of Gambling in Tasmania, Volume 1: Gambling industry trends and economic impacts, Prepared for the Tasmanian Government Department of Treasury and Finance.

Allen Consulting Group Pty Ltd. (2008). *The ARACY report card on the wellbeing of young Australians: Technical Report*. Retrieved from Woden, ACT: https://www.aracy.org.au

Alliance for Gambling Reform. (2015). AGR Fact Sheet: Poker machines are designed to addict. Retrieved from http://www.pokiesplayyou.org.au/designed_to_addict

Australian Bureau of Statistics. (2002). *Discussion Paper 1375.0: Measuring a Knowledge-based Economy and Society - an Australian Framework*. Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1375.0Aug%202002?OpenDocument

Australian Bureau of Statistics. (2008). 2039.0 - Information Paper: An Introduction to Socio-Economic Indexes for Areas (SEIFA), 2006. Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/mf/2039.0

Australian Bureau of Statistics. (2009). ANZSCO Australian and New Zealand Standard Classification of Occupations, Cat. no. 1220.0. Retrieved from www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0

Australian Bureau of Statistics. (2010). *General Social Survey: User Guide, Australia, 2010, Paper Questionnaire*. Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4159.0.55.002010?OpenDocument

Australian Bureau of Statistics. (2012a). Community Profiles. Retrieved from http://abs.gov.au/websitedbs/censushome.nsf/home/communityprofiles?opendocument&navpos=230

Australian Bureau of Statistics. (2012b). QuickStats. Retrieved from http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/209041222?opendocument&navpos=220

Australian Bureau of Statistics. (2013). *2033.0.55.001 - Socio-economic Indexes for Areas (SEIFA), Data Cube, 2011* Retrieved from: http://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001

Australian Bureau of Statistics. (2014). Australian Statistical Geography Standard. Retrieved from http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Australian+Statistical+Geography+Standard+(ASGS)

Australian Institute for Gambling Research. (1999). *Australian Gambling Comparative History and Analysis: Project Report*. Retrieved from Melbourne: https://assets.justice.vic.gov.au/vcglr/resources/bb81f943-d854-40de-8bab-b09d8bbd610f/australiangamblingcomparativehistory.pdf

Australian Institute of Health and Welfare. (2007). *Young Australians: their health and wellbeing*. Retrieved from Canberra: http://www.aihw.gov.au/publication-detail/?id=6442467991

Australian Institute of Health and Welfare. (2012). *Australia's health 2012. Australia's health no. 13. Cat. no. AUS 156.* Retrieved from Canberra: www.aihw.gov.au/publication-detail/?id=10737422172

Barratt, M. J., Livingston, M., Matthews, S., & Clemens, S. L. (2014). Gaming machine density is correlated with rates of help-seeking for problem gambling: a local area analysis in Victoria, Australia. *Journal of Gambling Issues*(29), 1-21. doi:10.4309/jgi.2014.29.16

Baum, F. (2016). *The new public health* (4th ed.). South Melbourne: Oxford University Press.

The Beach Hotel Jan Juc Pty Ltd for approval of premises as suitable for gaming with 30 gaming machines (Victorian Commission for Gambling Regulation 4 October 2010).

Benmara Pty Ltd for approval of premises as suitable for 60 gaming machines (Victorian Commission for Gambling and Liquor Regulation 18 March 2008).

Benmara Pty Ltd for approval of premises as suitable for gaming with 40 gaming machines (Victorian Commission for Gambling and Liquor Regulation 11 Nov 2014).

Benmara Pty Ltd for approval of premises as suitable for gaming with 40 gaming machines (Victorian Commission for Gambling Regulation 15 July 2009).

Benmara Pty Ltd for approval of premises as suitable for gaming with 40 gaming machines (Victorian Commission for Gambling Regulation 30 Sep 2011).

Bestman, A., Thomas, S. L., Randle, M., Pitt, H., Daube, M., & Pettigrew, S. (2016). Shaping pathways to gambling consumption? An analysis of the promotion of gambling and non-gambling activities from gambling venues. *Addiction Research & Theory, 24*(2), 152-162. doi:10.3109/16066359.2015.1093121

Billi, R., Stone, C., Marden, P., & Yeung, K. (2014). *The Victorian Gambling Study: A longitudinal study of gambling and health in Victoria, 2008–2012*. Retrieved from Victoria, Australia: http://www.responsiblegambling.vic.gov.au/information-and-resources/research/recent-research/billi,-r.-et-al-2014-the-victorian-

gambling-study-a-longitudinal-study-of-gambling-and-health-in-victoria,-2008-2012
Black, D. W., Shaw, M., McCormick, B., & Allen, J. (2013). Pathological gambling: relationship to obesity, self-reported chronic medical conditions, poor lifestyle choices, and impaired quality of life. *Comprehensive Psychiatry, 54*(2), 97-104. doi:10.1016/j.comppsych.2012.07.001
Brimbank City Council. (2007). Submission to the Select Committee on Gaming Licensing. Retrieved from http://www.parliament.vic.gov.au/images/stories/documents/council/Select_Committees/Gaming_Licensing/Submissions/GL38.pdf
Brown, H. (2013). *A review of gambling-related issues*. Retrieved from http://www.greaterdandenong.com/document/18237/review-of-gambling-issues
Brown, H. (2017). *A review of gambling related issues*. Retrieved from http://www.greaterdandenong.com/document/18464/statistical-data-for-victorian-communities
Browne, M., Langham, E., Rawat, V., Greer, N., Li, E., Rose, J., . . . Best, T. (2016). *Assessing gambling-related harm in Victoria: a public health perspective*. Retrieved from Melbourne: https://www.responsiblegambling.vic.gov.au/information-and-resources/research/recent-research/assessing-gambling-related-harm-in-victoria-a-public-health-perspective
Brownlee, H. (1993). Neighbourhood and local services. In P. McDonald (Ed.), *Australian Living Standards Study: Berwick Report Part 1: The Household Survey*. Melbourne: Australian Institute of Family Studies.
Davidson, T., & Rodgers, B. (2010). *2009 Survey of The Nature and Extent of Gambling, and Problem Gambling, in the Australian Capital Territory*. Retrieved from Canberra: http://www.problemgambling.act.gov.au/Recent%20Research/ACT%20Gambling%20Prevalence%20Study.pdf
Delfabbro, P., & King, D. (2012). Gambling in Australia: experiences, problems, research and policy. *Addiction, 107*(9), 1556-1561. doi:10.1111/j.1360-0443.2012.03802.x
Department of Health. (2013). *Guide to municipal public health and wellbeing planning*. Retrieved from Melbourne: https://www2.health.vic.gov.au/getfile?sc_itemid=%7b1D53C7A2-E9BB-4919-AFE9-B7AFA15CAC32%7d&title=Guide%20to%20municipal%20public%20health%20and%20wellbeing%20planning
Department of Health and Human Services. (2015). *Victorian public health and wellbeing plan 2015-2019*. Victorian Government.
Department of Justice. (2006). *Taking action on problem gambling : a strategy for combating problem gambling in Victoria*. Retrieved from Melbourne: http://www.parliament.vic.gov.au/images/stories/documents/council/Select_Committees/Gaming_Licensing/Submissions/GL32_Attachments/1.02.pdf
Department of Justice. (2009). *A Study of Gambling in Victoria - Problem Gambling from a Public Health Perspective* (978-1-921028-93-9). Retrieved from Melbourne: https://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0013/4027/A-study-of-gambling-in-Victoria-PRINT-Sept-10.pdf

Department of Treasury and Finance Victoria. (2015). Community Support Fund Fact Sheet 2014-15. Retrieved from http://www.dtf.vic.gov.au/Publications/Victoria-Economy-publications/Community-Support-Fund-fact-sheet-2014-15

Dodson, J., & Sipe, N. (2008). Planned household risk: Mortgage and oil vulnerability in Australian cities. *Australian Planner, 45*(1), 38-47. doi:10.1080/07293682.2008.9982634

Donaldson, P., Rockloff, M. J., Browne, M., Sorenson, C.-M., Langham, E., & Li, E. (2015). Attitudes Towards Gambling and Gambling Reform in Australia. *Journal of Gambling Studies, 32*(1), 243-259. doi:10.1007/s10899-015-9529-y

Doughney, J. (2006). The Poker-machine State in Australia: A Consideration of Ethical and Policy Issues. *International Journal of Mental Health and Addiction, 4*(4), 351-368. doi:10.1007/s11469-006-9031-y

Dowling, N. (2014). *The impact of gambling problems on families*. Retrieved from

Dowling, N., Jackson, A., Thomas, S. A., & Frydenberg, E. (2010) Children at risk of developing problem gambling. The Problem Gambling Research and Treatment Centre.

Dowling, N., Smith, D., & Thomas, T. (2005). Electronic gaming machines: are they the 'crack-cocaine' of gambling? *Addiction, 100*, 33-45. doi:10.1111/j.1360-0443.2004.00962.x

Dowling, N., Suomi, A., Jackson, A., & Lavis, T. (2015). Problem gambling family impacts: development of the Problem Gambling Family Impact Scale(Journal, Electronic), 25 February 2016. Retrieved from http://link.springer.com/article/10.1007%2Fs10899-015-9582-6 doi:10.1007/s10899-015-9582-6

Ferris, J., & Wynne, H. (2001). *The Canadian Problem Gambling Index: Final Report*. Retrieved from http://www.ccgr.ca/en/projects/canadian-problem-gambling-index.aspx

Fong, D. K. C., Fong, H. N., & Li, S. Z. (2011). The social cost of gambling in Macao: before and after the liberalisation of the gaming industry. *International Gambling Studies, 11*(1), 43-56. doi:10.1080/14459795.2010.548393

Gambling Information Resource Office. (2015). Pokie Caps in Victoria Information Sheet: Victorian Responsible Gambling Foundation.

Greenslade, D. (2013). *Legitimising harm: A critical ethnography of gambling in a community.* (Doctor of Philosophy), University of Ballarat, Ballarat.

Griffith University - Urban Research Program. (2015). VAMPIRE 2011 for Australian Capital Cities. Retrieved 15/3/2017 https://portal.aurin.org.au/

Hare, S. (2015). *Study of Gambling and Health in Victoria*. Retrieved from Victoria, Australia: https://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0018/25551/Study_of_gambling_and_health_in_Victoria.pdf

Hing, N., Russell, A., Tolchard, B., & Nuske, E. (2015). Are There Distinctive Outcomes from Self-Exclusion? An Exploratory Study Comparing Gamblers Who Have Self-Excluded, Received Counselling, or Both. *International Journal of Mental Health and Addiction, 13*(4), 481-496. doi:10.1007/s11469-015-9554-1

Huggett, C., & McDonald, D. (2012). *The Victorian Gambling Study Qualitative Component: Report of Findings from Qualitative Interviews*. Retrieved

from Melbourne: https://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0011/4025/Victorian-Gambling-Study-Qualitative-Component-Report.pdf
ID the population experts. (2012). Community Profile, City of Whittlesea. Retrieved from http://profile.id.com.au/whittlesea
International Wellbeing Group. (2006). *Personal Wellbeing Index*. Retrieved from Melbourne:
Kirner, J. (Producer). (2008). Joan Kirner bragging about legalised gaming. Retrieved from https://www.youtube.com/watch?v=fxMgfljKrSY
Korn, D., Gibbins, R., & Azmier, J. (2003). Framing Public Policy Towards a Public Health Paradigm for Gambling. *Journal of Gambling Studies, 19*(2), 235-256.
Korn, D., & Shaffer, H. J. (1999). Gambling and the Health of the Public: Adopting a Public Health Perspective. *Journal of Gambling Studies, 15*(4), 289-365.
Langham, E., Thorne, H., Browne, M., Donaldson, P., Rose, J., & Rockloff, M. (2016). Understanding gambling related harm: a proposed definition, conceptual framework, and taxonomy of harms. *BMC public health, 16*(1), 80. doi:10.1186/s12889-016-2747-0
Lin, J., Casswell, S., Easton, B., Huckle, T., Asiasiga, L., & You, R. (2010). Time and money spent gambling and the relationship with quality-of-life measures: A national study of New Zealanders. *Journal of Gambling Issues*(24), 33. doi:10.4309/2010.24.4
Livingstone, C. (2001). The social economy of poker machine gambling in Victoria. *International Gambling Studies, 1*(1), 46-65. doi:10.1080/14459800108732287
Livingstone, C. (2005). Desire and the consumption of danger: Electronic gaming machines and the commodification of interiority. *Addiction Research & Theory, 13*(6), 523-534. doi:10.1080/16066350500338161
Livingstone, C. (2009). Gambling research: Politics, magma and the public interest. *Gambling Research: Journal of the National Association for Gambling Studies (Australia), 21*(2), 3-6.
Livingstone, C., & Adams, P. J. (2011). Harm promotion: observations on the symbiosis between government and private industries in Australasia for the development of highly accessible gambling markets. *Addiction (Abingdon, England), 106*(1), 3.
Livingstone, C., & Francis, L. (2014a). *Review of decisions of the Victorian Commission for Gambling and Liquor Regulation: Electronic Gambling Machine Applications* Retrieved from Melbourne: http://www.mav.asn.au/policy-services/social-community/Documents/Review of electronic gambling machine applications 2014.doc
Livingstone, C., & Francis, L. (2014b). *What is the evidence to support reduction of maximum bets on electronic gambling machines? Discussion of the current arrangements for community benefit statements by Victorian club gambling venues. Discussion of the likely effects of further local caps on EGM numbers on gambling harm and the prevalence of problem gambling. Report to Municipal Association of Victoria.* . Retrieved from Melbourne: http://www.mav.asn.au/policy-services/social-community/Documents/Evidence%20report%20and%20discussion%20on

%20issues%20relating%20to%20electronic%20gambling%20machines.docx
Livingstone, C., Francis, L., & Wynen, T. (2015). How real are claims of poker machine community benefits? *The Conversation*. Retrieved from http://theconversation.com/how-real-are-claims-of-poker-machine-community-benefits-49136
Livingstone, C., Kipsaina, C., & Rintoul, A. (2012). *Assessment of poker machine expenditure and community benefit claims in selected Commonwealth Electoral Divisions*. Retrieved from https://engage.vic.gov.au/application/files/4614/8609/9187/Submission_-_School_of_Public_Health_and_Preventive_Medicine_Monash_University_.PDF
Livingstone, C., & Woolley, R. (2007). Risky Business: A Few Provocations on the Regulation of Electronic Gaming Machines. *International Gambling Studies, 7*(3), 361-376. doi:10.1080/14459790701601810
Livingstone, C., & Woolley, R. (2010). Gambling machines, player safety and institutional transformation. *Gambling Research: Journal of the National Association for Gambling Studies (Australia), 22*(2), 32-39.
Lorains, F. K., Cowlishaw, S., & Thomas, S. A. (2011). Prevalence of comorbid disorders in problem and pathological gambling: systematic review and meta-analysis of population surveys. *Addiction, 106*(3), 490-498. doi:10.1111/j.1360-0443.2010.03300.x
Lund, I. (2009). Gambling Behaviour and the Prevalence of Gambling Problems in Adult EGM Gamblers when EGMs are Banned. A Natural Experiment. *Journal of Gambling Studies, 25*(2), 215-225. doi:10.1007/s10899-009-9127-y
Macedon Ranges Shire Council v Romsey Hotel Pty Ltd & Anor (2008) VSCA 45 (Supreme Court of Victoria - Court of Appeal 2008).
Manning, J. (Writer). (2015). Ka-Ching! Pokie Nation. In N. Lawrence & M. Goldman (Producer): Looking Glass Pictures.
Markham, F., Doran, B., & Young, M. (2016). The relationship between electronic gaming machine accessibility and police-recorded domestic violence: A spatio-temporal analysis of 654 postcodes in Victoria, Australia, 2005–2014. *Social science & medicine*. doi:10.1016/j.socscimed.2016.06.008
Markham, F., Young, M., & Doran, B. (2014). Gambling expenditure predicts harm: evidence from a venue-level study. *Addiction, 109*(9), 1509-1516. doi:10.1111/add.12595
Markham, F., Young, M., & Doran, B. (2016). The relationship between player losses and gambling-related harm: evidence from nationally representative cross-sectional surveys in four countries. *Addiction, 111*(2), 320-330. doi:10.1111/add.13178
Marshall, D. (1998a). Missing the jackpot? The proliferation of gambling in Australia and its effect on local communities. *Australian Geographical Studies, 36*(3), 237-247.
Marshall, D. (2005). The Gambling Environment and Gambler Behaviour: Evidence from Richmond-Tweed, Australia. *International Gambling Studies, 5*(1), 63-83. doi:10.1080/14459790500099471
Marshall, D., & Baker, R. (2001). Unfair odds? Factors influencing the distribution of electronic gaming machines in Melbourne. *Urban Policy and Research, 19*(1), 77-92. doi:10.1080/08111140108727864

Marshall, D. C. (1998b). Missing the jackpot? The proliferation of gambling in Australia and its effect on local communities. *Australian Geographical Studies, 36*(3), 237-247.
McAllister, I. (2014). Public opinion towards gambling and gambling regulation in Australia. *International Gambling Studies, 14*(1), 146-160. doi:10.1080/14459795.2013.861001
McCaughey VicHealth Community Wellbeing Unit. (2011). Community Indicators Victoria. Retrieved from www.communityindicators.net.au
McDonald, J. (2009). The biggest challenge? Recognition of gambling as a public issue. *Gambling Research: Journal of the National Association for Gambling Studies (Australia), 21*(1), 47-50.
McMillen, J., & Doran, B. (2006). Problem Gambling and Gaming Machine Density: Socio-spatial Analysis of Three Victorian Localities. *International Gambling Studies, 6*(1), 5-29. doi:10.1080/14459790600644093
McMillen, J., Marshall, D., Ahmed, E., & Wenzel, M. (2004). *2003 Victorian longitudinal community attitudes survey*. Retrieved from Melbourne: http://digitalcollections.anu.edu.au/handle/1885/45189
McMillen, J., & Wright, J. S. F. (2008). Re-regulating the Gambling Industry: Regulatory Reform in Victoria and New South Wales, 1999-2006. *Australian Journal of Political Science, 43*(2), 277-300. doi:10.1080/10361140802035788
Messerlian, C., Derevensky, J., & Gupta, R. (2005). Youth gambling problems: a public health perspective. *Health promotion international, 20*(1), 69-79. doi:10.1093/heapro/dah509
Miller, H. (2016). *Responsible gambling: Past, present and future*. Retrieved from Melbourne: http://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0008/32300/Background-paper-Responsible-gambling-past-present-and-future.pdf
Miller, H., Thomas, S. L., Smith, K., & Robinson, P. (2016). Surveillance, responsibility and control: an analysis of government and industry discourses about “problem” and “responsible” gambling. *Addiction Research & Theory, 24*(2), 163-176. doi:10.3109/16066359.2015.1094060
Modelling GIS and Planning Products. (2010). 2011 Local Government Profiles. Retrieved from https://www.data.vic.gov.au/data/dataset/2011-local-government-area-profile
Mond, J., Davidson, T., & McAllister, I. (2011). *Public Opinion on Gambling*. Retrieved from https://lyceum.anu.edu.au/wp-content/blogs/3/uploads/ANUpoll-%20Gambling1.pdf
Morasco, B. J., Vom Eigen, K. A., & Petry, N. M. (2006). Severity of gambling is associated with physical and emotional health in urban primary care patients. *General Hospital Psychiatry, 28*(2), 94-100. doi:10.1016/j.genhosppsych.2005.09.004
Neal, P., Delfabbro, P., & O'Neil, M. (2005). *Problem Gambling and Harm: Towards a National Definition*. Melbourne: Gambling Research Australia.
NEPCP. (2012). *Social Outings Don't Gamble with your group 2nd edition*. Retrieved from http://www.nepcp.org.au/resources/social-outings-guide-don%E2%80%99t-gamble-your-group
Noble Park Football Club Social Club to vary the number of electronic gaming machines from 50 to 70 (Victorian Commission for Gambling and Liquor Regulation 2017).

Orford, J. (2009). Governments as promoters of dangerous consumptions. *Addiction, 104*(5), 693-695.
Orford, J., Griffiths, M., Wardle, H., Sproston, K., & Erens, B. (2009). Negative public attitudes towards gambling: findings from the 2007 British Gambling Prevalence Survey using a new attitude scale. *International Gambling Studies, 9*(1), 39-54. doi:10.1080/14459790802652217
Pearce, J., Mason, K., Hiscock, R., & Day, P. (2008). A national study of neighbourhood access to gambling opportunities and individual gambling behaviour. *Journal of Epidemiology and Community Health, 62*(10), 862-868. doi:10.1136/jech.2007.068114
Pickernell, D., Keast, R., Brown, K., Yousefpour, N., & Miller, C. (2013). Taking the Gamble: Local and regional policy issues of access to electronic gaming machines (EGMs): A case study of Victoria, Australia. *Australasian Journal of Regional Studies, 19*(1), 275-294.
Productivity Commission. (1999a). *Australia's Gambling Industries, Report No. 10, Vol 1*. Canberra: AusInfo.
Productivity Commission. (1999b). *Australia's Gambling Industries, Report No. 10, Vol 2*. Canberra: AusInfo.
Productivity Commission. (1999c). *Australia's Gambling Industries, Report No. 10, Vol 3*. Canberra: AusInfo.
Productivity Commission. (2010a). *Gambling, Report No. 50, Vol 1*. Canberra.
Productivity Commission. (2010b). *Gambling, Report No. 50, Vol 2*. Canberra.
Queensland Government Statistician's Office. (2016). *Australian Gambling Statistics, 32nd edition*: Queensland Treasury.
Rintoul, A. C., Livingstone, C., Mellor, A. P., & Jolley, D. (2013). Modelling vulnerability to gambling related harm: How disadvantage predicts gambling losses. *Addiction Research & Theory, 21*(4), 329-338. doi:10.3109/16-66359.2012.727507
Robson, B. (2011). *Building Lives, Building Community in South Morang, Mernda/Doreen and Whittlesea township growth areas*. Retrieved from Melbourne: http://apo.org.au/node/56969
Rockloff, M. J., Thorne, H., Goodwin, B., Moskovsky, N., Langham, E., Browne, M., . . . Rose, J. (2015). *EGM environments that contribute to excess consumption and harm*. Retrieved from Melbourne: https://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0009/25587/Rockloff_EGM_environments_that_contribute_to_excess_consumption_and_harm_Nov_2015.pdf
Room, R., Turner, N., & Ialomiteanu, A. (1999). Community effects of the opening of the Niagara casino. *Addiction, 94*(10), 1449-1466.
Sargent, M., & Holmes, K. (2014). The application of a concentration measure in assessing expenditure and tax yield implications of the distribution of Electronic Gaming Machines. *International Gambling Studies, 14*(1), 1-14. doi:10.1080/14459795.2013.837086
Saugeres, L., Thomas, A., Moore, S., & Bates, G. (2012). *Gamblers Tell their Stories: Life Patterns of Gambling*. Swinburne University of Technology. Victorian Responsible Gambling Foundation, Melbourne.
South Australian Centre for Economic Studies. (2001). *The Impact of Gaming Machines on Small Regional Economies*. Retrieved from www.aihw.gov.au/publication-detail/?id=6442467991

South Australian Centre for Economic Studies. (2005a). *Community Impacts of Electronic Gaming Machine Gambling (Part A) FINAL REPORT*. Retrieved from Melbourne: https://www.adelaide.edu.au/saces/docs/publications-reports/community-impacts-of-egm-gambling-report-a.pdf

South Australian Centre for Economic Studies. (2005b). *Problem Gambling and Harm: Towards a National Definition*. Retrieved from Melbourne: https://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjbwfrSzfHSAhUBOpQKHcZ7CckQFggZMAA&url=https%3A%2F%2Fwww.adelaide.edu.au%2Fsaces%2Fdocs%2Fproblemgamblingandharmtowardnationaldefinition.pdf&usg=AFQjCNFWVhWSB7Eu6Qr5xJOsUOX9ACFW2A&bvm=bv.150729734,d.dGo

South Australian Centre for Economic Studies. (2008). *Social and Economic Impact Study into Gambling in Tasmania Volume 1 Final Report*. Retrieved from https://www.adelaide.edu.au/saces/docs/tassocialeconomicimpactstudyvolume1.pdf

State of Victoria. (2014-2016). *Royal Commission into Family Violence: Summary and recommendations, Parl Paper No 132*. Retrieved from Melbourne: http://www.rcfv.com.au/

Stevens, J. (1996). *Applied multivariate statistics for the social sciences* (3rd ed.). Mahwah: Lawrence Erlbaum.

Storer, J., Abbott, M., & Stubbs, J. (2009). Access or adaptation? A meta-analysis of surveys of problem gambling prevalence in Australia and New Zealand with respect to concentration of electronic gaming machines. *International Gambling Studies, 9*(3), 225-244. doi:10.1080/14459790903257981

Suomi, A., Jackson, A., Dowling, N., Lavis, T., Patford, J., Thomas, S. A., . . . Cockman, S. (2013). Problem gambling and family violence: family member reports of prevalence, family impacts and family coping. *Asian Journal of Gambling Issues and Public Health, 3*(1), 1-15. doi:10.1186/2195-3007-3-13

Swinburne Institute for Social Research. (2008). Housing in Victoria. Retrieved from housinginvictoria.com.au

The Economist. (2014). The house wins. *The Economist*. Retrieved from http://www.economist.com/blogs/graphicdetail/2014/02/daily-chart-0

Thomas, A., Allen, F., & Phillips, J. (2009). Electronic Gaming Machine Gambling: Measuring Motivation. *Journal of Gambling Studies, 25*(3), 343-355. doi:10.1007/s10899-009-9133-0

Thomas, A., Moore, S., Kyrios, M., Bates, G., Meredyth, D., & Jessop, G. (2010). *Problem gambling vulnerability: The interaction between access, individual cognitions and group beliefs/preferences*. Retrieved from Melbourne:

Thomas, A., Sullivan, G. B., & Allen, F. C. L. (2008). A Theoretical Model of EGM Problem Gambling: More than a Cognitive Escape. *International Journal of Mental Health and Addiction, 7*(1), 97-107. doi:10.1007/s11469-008-9152-6

Thomas, S. L., & Lewis, S. (2012). *Conceptualisations of gambling risks and benefits: A socio-cultural study of 100 Victorian gamblers*. Retrieved from Melbourne, Victoria Australia: https://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0008/4040/Conceptualisation-of-gambling-risks-and-benefits.PDF

Thomas, S. L., Lewis, S., McLeod, C., & Haycock, J. (2012). 'They are working every angle'. A qualitative study of Australian adults' attitudes towards, and interactions with, gambling industry marketing strategies. *International Gambling Studies, 12*(1), 111-127. doi:10.1080/14459795.2011.639381

Vasiliadis, S. D., Jackson, A. C., Christensen, D., & Francis, K. (2013). Physical accessibility of gaming opportunity and its relationship to gaming involvement and problem gambling: A systematic review. *Journal of Gambling Issues*, 1-46. doi:10.4309/jgi.2013.28.2; 17

VCGLR. (2015). Victorian Commission for Gambling and Liquor Regulation Annual Report 2014-15.

Victorian Auditor-General. (2010). *Taking Action on Problem Gambling, PP No 330, Session 2006-10*. Retrieved from Melbourne: https://www.audit.vic.gov.au/report/taking-action-problem-gambling

Victorian Commission for Gambling and Liquor Regulation. Gambling data. Retrieved from http://www.vcglr.vic.gov.au/home/resources/data+and+research/data/index.html

Victorian Commission for Gambling and Liquor Regulation. (2013). Community benefit statement form. Retrieved from http://assets.justice.vic.gov.au/vcglr/resources/4847ef61-5768-4e34-8199-2aa8a663452f/cbs_form.pdf

Victorian Commission for Gambling and Liquor Regulation. (2015a). *Gambling Application Kit Economic and Social Impact Submission*.

Victorian Commission for Gambling and Liquor Regulation. (2015b). Gambling application kit: Economic and social impact submission. Melbourne.

Victorian Commission for Gambling and Liquor Regulation. (2015c). Strategic Plan 2015-18. Retrieved from http://assets.justice.vic.gov.au/vcglr/resources/87444268-48d8-45a3-90c4-636cfed7af45/sp+2015-2018+vfinal.pdf

Victorian Competition and Efficiency Commission. (2012). *Counting the cost: Inquiry into the costs of problem gambling, final report*. Retrieved from Melbourne: http://apo.org.au/node/35566

Victorian Local Governance Association (2013). [Factsheet #4: A public health approach to gambling]. Web Page.

Victorian Responsible Gambling Foundation. (2014). Know the facts about pokies. Retrieved from http://www.responsiblegambling.vic.gov.au/awareness-and-prevention/gamble-aware/know-the-facts-about-pokies

Victorian Responsible Gambling Foundation. (2015a). *Annual Report 2014-15*. Retrieved from http://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0018/25326/Victorian-Responsible-Gambling-Foundation-Annual-Report-2014-15.pdf

Victorian Responsible Gambling Foundation. (2015b). *Research Directions 2015-2018*. Retrieved from http://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0009/4023/foundation-research-directions-2015-2018.pdf

Victorian Responsible Gambling Foundation. (2015c). *Using a public health approach in the prevention of gambling-related harm: Background paper*. Retrieved from Melbourne:

http://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0013/20254/Public-health-approach-web.pdf
Wall, M., Peter, M., You, R., Mavoa, S., & Witten, K. (2010). *Problem Gambling Research: A study of community level harm from gambling, Phase one Final Report, Report to Ministry of Health* (M. University Ed.). Auckland: Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki.
Wardle, H., Moody, A., Spence, S., Orford, J., Volberg, R., Jotangia, D., . . . Dobbie, F. (2011). *British Gambling Prevalence Survey 2010, prepared for: The Gambling Commission*: National Centre for Social Research.
Welte, J. W., Wieczorek, W. F., Barnes, G. M., & Tidwell, M.-C. O. (2006). Multiple Risk Factors for Frequent and Problem Gambling: Individual, Social, and Ecological. *Journal of Applied Social Psychology,, 36*(6), 1548-1568.
Wheeler, S., Round, D., & Wilson, J. (2011). The Relationship Between Crime and Electronic Gaming Expenditure: Evidence from Victoria, Australia. *Journal of Quantitative Criminology, 27*(3), 315-338. doi:10.1007/s10940-010-9123-5
Wilcox, M. (1983). *Report of Board of Inquiry into Poker Machines*. Retrieved from Melbourne: http://www.parliament.vic.gov.au/papers/govpub/VPARL1982-85No128A.pdf
Williams, R. J., West, B. L., & Simpson, R. I. (2012). *Prevention of Problem Gambling: A Comprehensive Review of the Evidence and Identified Best Practices: Report prepared for the Ontario Problem Gambling Research Centre and the Ontario Ministry of Health and Long Term Care*.
World Health Organization. (1986). *Ottawa Charter for Health Promotion.* Paper presented at the First International Conference on Health Promotion, Canada.
World Health Organization. (2012). Social Determinants of Health: Key Concepts. Retrieved from http://www.who.int/social_determinants/thecommission/finalreport/key_concepts/en/
Yates, J., & Gabriel, M. (2006). *Housing affordability in Australia: National research venture 3: Housing affordability for lower income Australians, Research Paper 3*. Retrieved from https://www.ahuri.edu.au/__data/assets/pdf_file/0018/2682/NRV3_Research_Paper_3.pdf
Young, M. (2010). Re-placing Geographic Accessibility: A Response to the Productivity Commission Gambling Research. *Journal of the National Association for Gambling Studies (Australia), 22*(2), 20-31.
Young, M. (2013). Statistics, scapegoats and social control: A critique of pathological gambling prevalence research. *Addiction Research & Theory, 21*(1), 1-11. doi:10.3109/16066359.2012.680079
Young, M., Abu-Duhou, I., Barnes, T., Creed, E., Morris, M., Stevens, M., & Tyler, B. (2006). *Northern Territory Gambling Prevalance Survey 2005*. Darwin: School for Social and Policy Research, Charles Darwin University.
Young, M., Markham, F., & Doran, B. (2012a). Placing Bets: gambling venues and the distribution of harm. *Australian Geographer, 43*(4), 425-444. doi:10.1080/00049182.2012.731302

Young, M., Markham, F., & Doran, B. (2012b). Too close to home? The relationships between residential distance to venue and gambling outcomes. *International Gambling Studies, 12*(2), 257-273. doi:10.1080/14459795.2012.664159